LTE Band 2

Channel Bandwidth: 20MHz

Channel	18700	RB Size 1	RB Offset 0	Channel	18700	RB Size 100	RB Offset 0

Channel Bandwidth: 20MHz

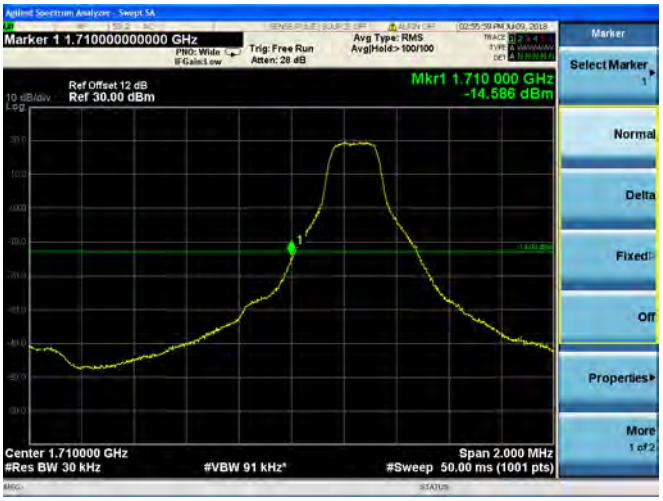
Channel	19100	RB Size 1	RB Offset 99	Channel	19100	RB Size 100	RB Offset 0

LTE Band 4							
Channel Bandwidth: 1.4MHz							
Channel	19957	RB Size 1	RB Offset 0	Channel	20393	RB Size 6	RB Offset 0
Channel Bandwidth: 1.4MHz							
Channel	19957	RB Size 1	RB Offset 5	Channel	20393	RB Size 6	RB Offset 0

LTE Band 4

Channel Bandwidth: 3MHz

Channel	19965	RB Size 1	RB Offset 0	Channel	20385	RB Size 15	RB Offset 0



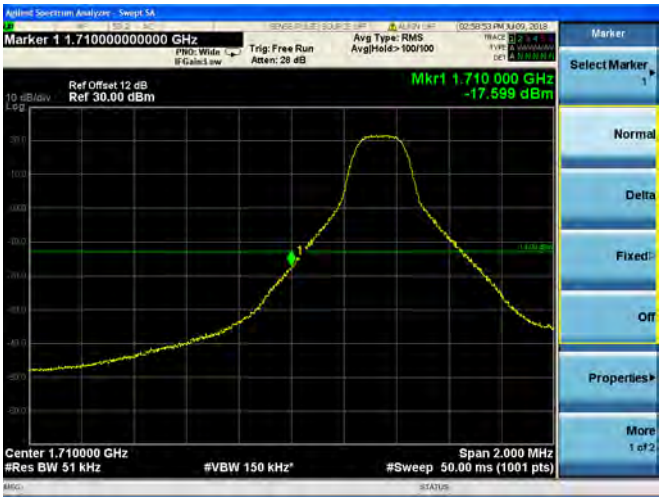
Channel Bandwidth: 3MHz

Channel	19965	RB Size 1	RB Offset 14	Channel	20385	RB Size 15	RB Offset 0

LTE Band 4

Channel Bandwidth: 5MHz

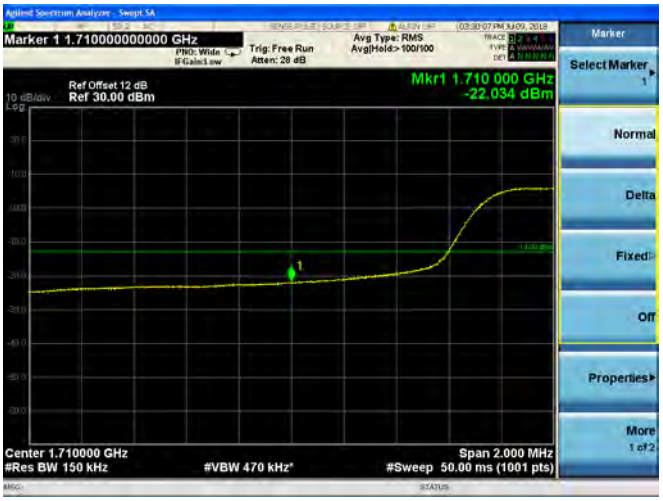
Channel	19975	RB Size 1	RB Offset 0	Channel	20375	RB Size 25	RB Offset 0



Channel Bandwidth: 5MHz

Channel	19975	RB Size 1	RB Offset 24	Channel	20375	RB Size 25	RB Offset 0

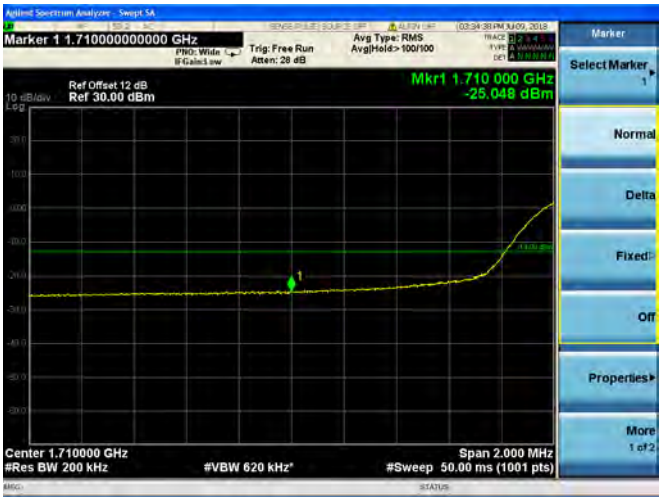
LTE Band 4							
Channel Bandwidth: 10MHz							
Channel	20000	RB Size 1	RB Offset 0	Channel	20350	RB Size 50	RB Offset 0
Channel Bandwidth: 10MHz							
Channel	20000	RB Size 1	RB Offset 49	Channel	20350	RB Size 50	RB Offset 0

LTE Band 4							
Channel Bandwidth: 15MHz							
Channel	20025	RB Size 1	RB Offset 0	Channel	20325	RB Size 75	RB Offset 0
							
Channel Bandwidth: 15MHz							
Channel	20025	RB Size 1	RB Offset 74	Channel	20325	RB Size 75	RB Offset 0

LTE Band 4

Channel Bandwidth: 20MHz

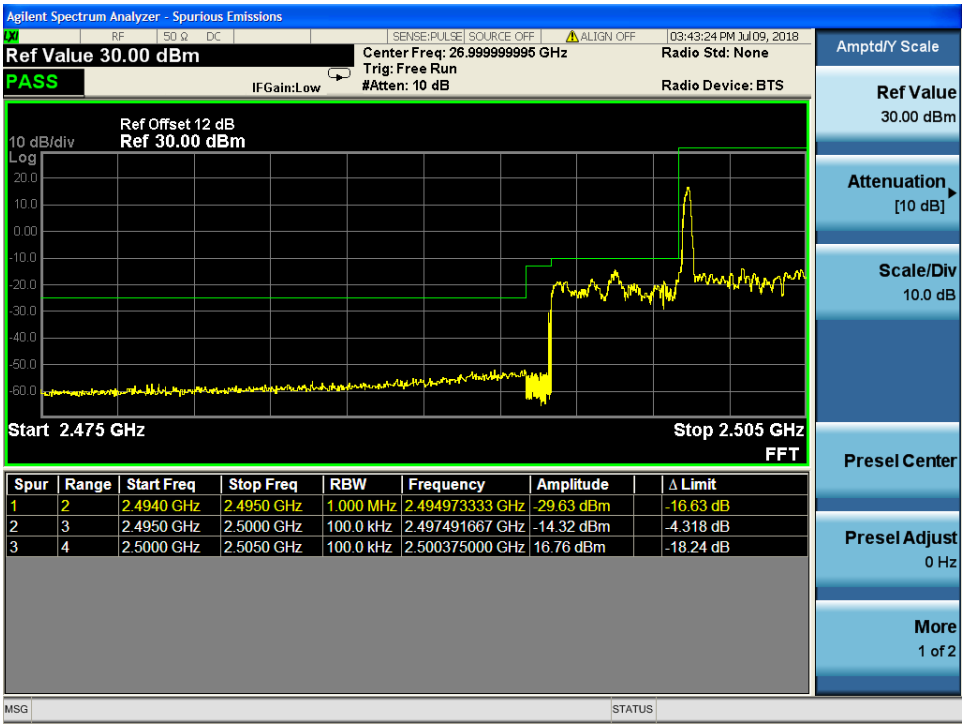
Channel	20050	RB Size 1	RB Offset 0	Channel	20300	RB Size 100	RB Offset 0

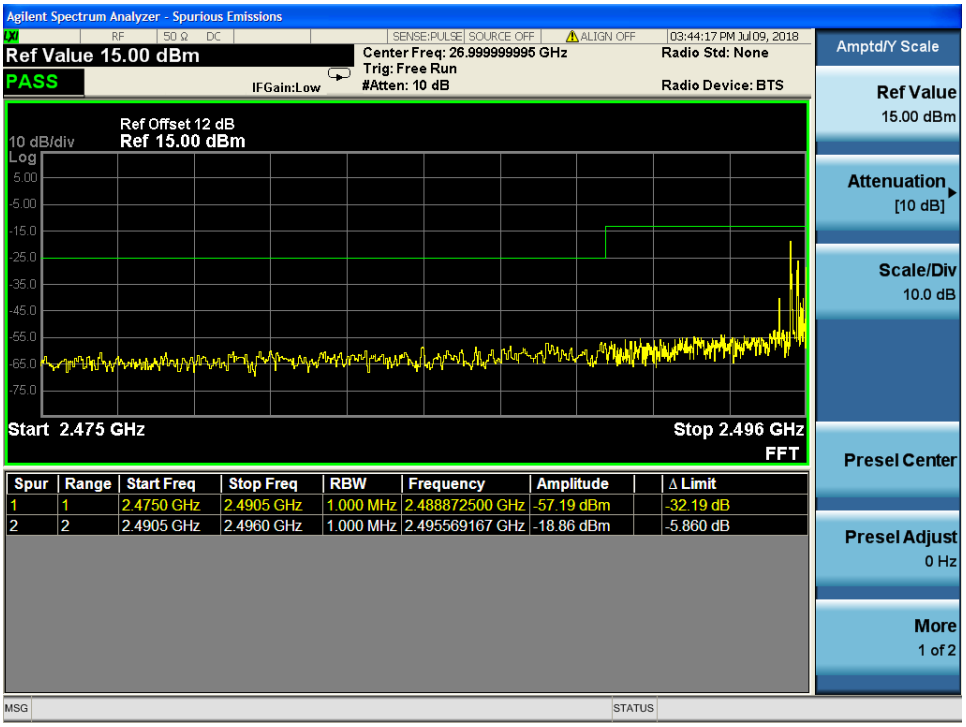


Channel Bandwidth: 20MHz

Channel	20050	RB Size 1	RB Offset 99	Channel	20300	RB Size 100	RB Offset 0

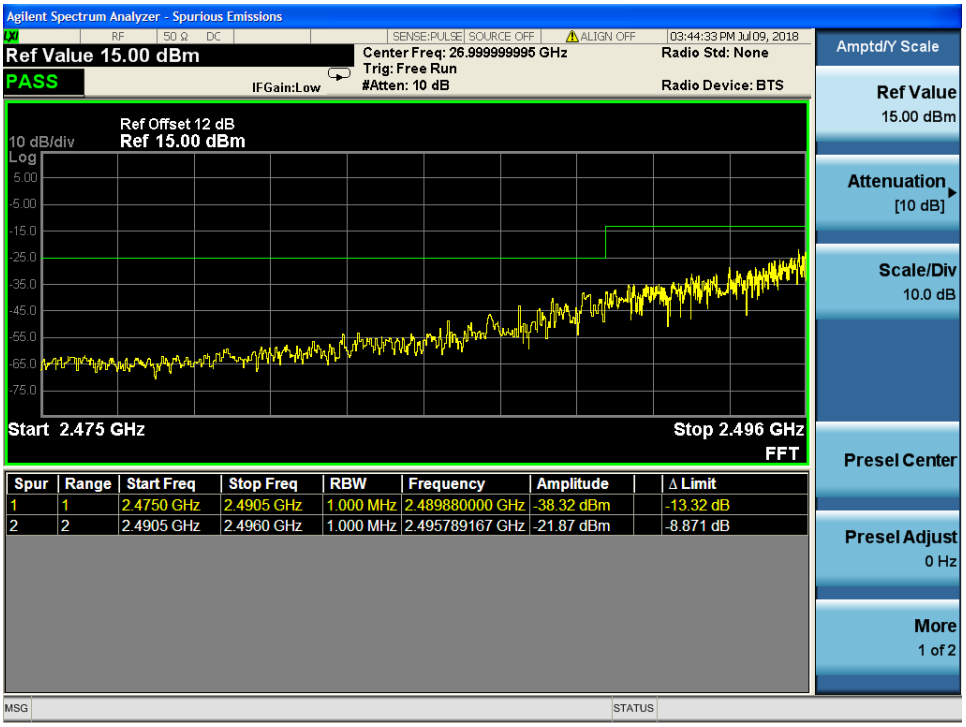
LTE Band 7			
Channel Bandwidth: 5MHz			
Channel	20775	RB Size 1	RB Offset 0





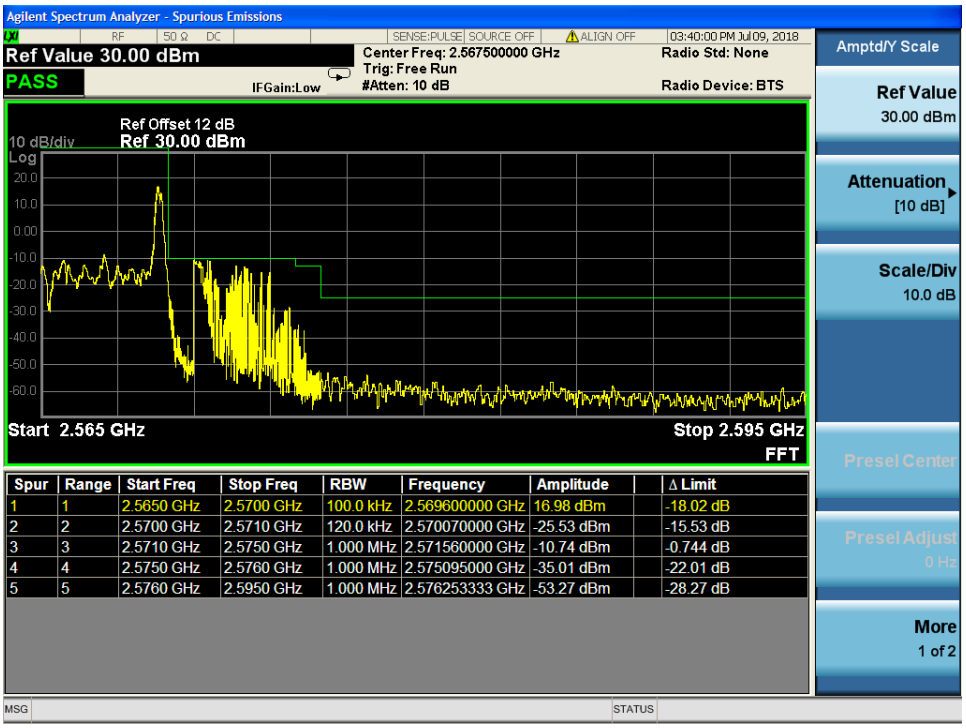
LTE Band 7			
Channel Bandwidth: 5MHz			
Channel	20775	RB Size 25	RB Offset 0

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4940 GHz	2.4950 GHz	1.000 MHz	2.494586667 GHz	-27.07 dBm	-14.07 dB
2	3	2.4950 GHz	2.5000 GHz	100.0 kHz	2.497500000 GHz	-13.20 dBm	-3.196 dB
3	4	2.5000 GHz	2.5050 GHz	100.0 kHz	2.504591667 GHz	5.840 dBm	-29.16 dB



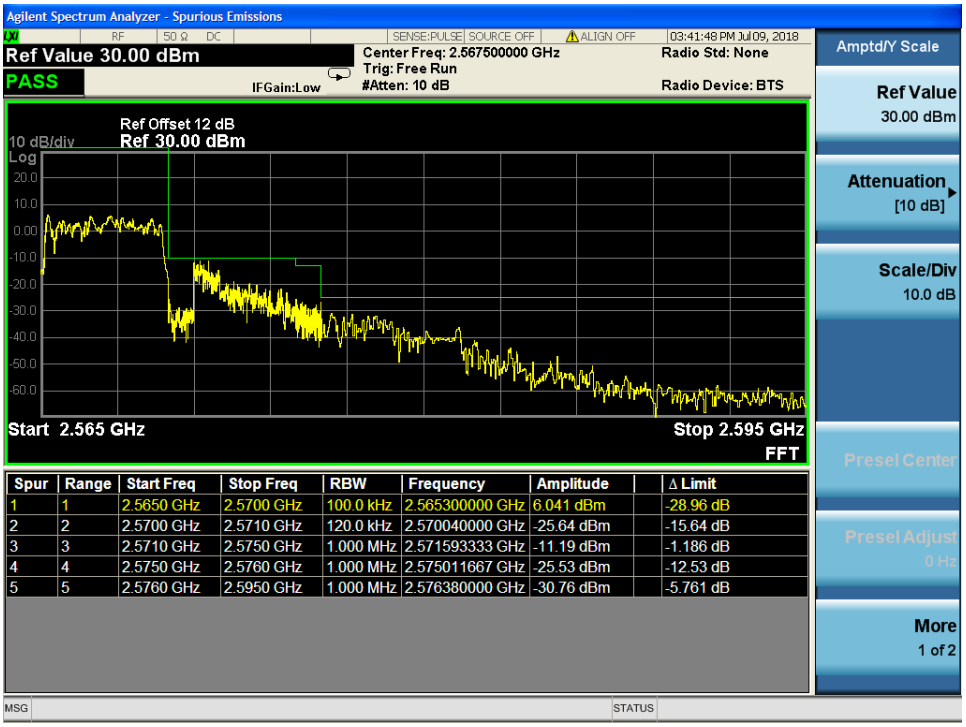
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489880000 GHz	-38.32 dBm	-13.32 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.495789167 GHz	-21.87 dBm	-8.871 dB

LTE Band 7			
Channel Bandwidth: 5MHz			
Channel	21425	RB Size 1	RB Offset 24



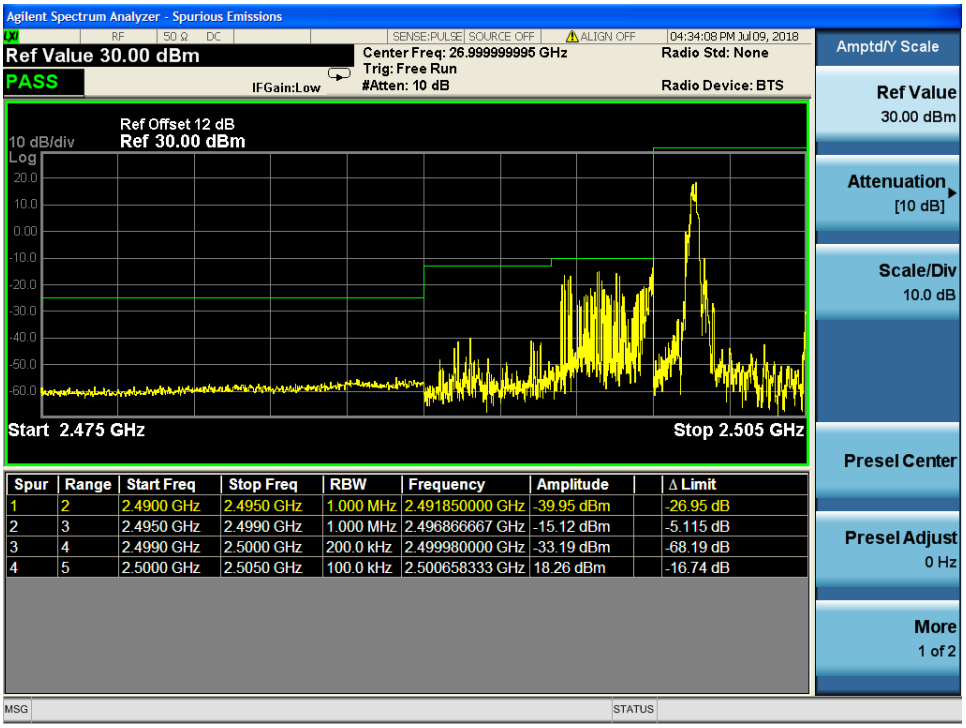
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.5700 GHz	100.0 kHz	2.569600000 GHz	16.98 dBm	-18.02 dB
2	2	2.5700 GHz	2.5710 GHz	120.0 kHz	2.570070000 GHz	-25.53 dBm	-15.53 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571560000 GHz	-10.74 dBm	-0.744 dB
4	4	2.5750 GHz	2.5760 GHz	1.000 MHz	2.575095000 GHz	-35.01 dBm	-22.01 dB
5	5	2.5760 GHz	2.5950 GHz	1.000 MHz	2.576253333 GHz	-53.27 dBm	-28.27 dB

Channel	21425	RB Size 25	RB Offset 0

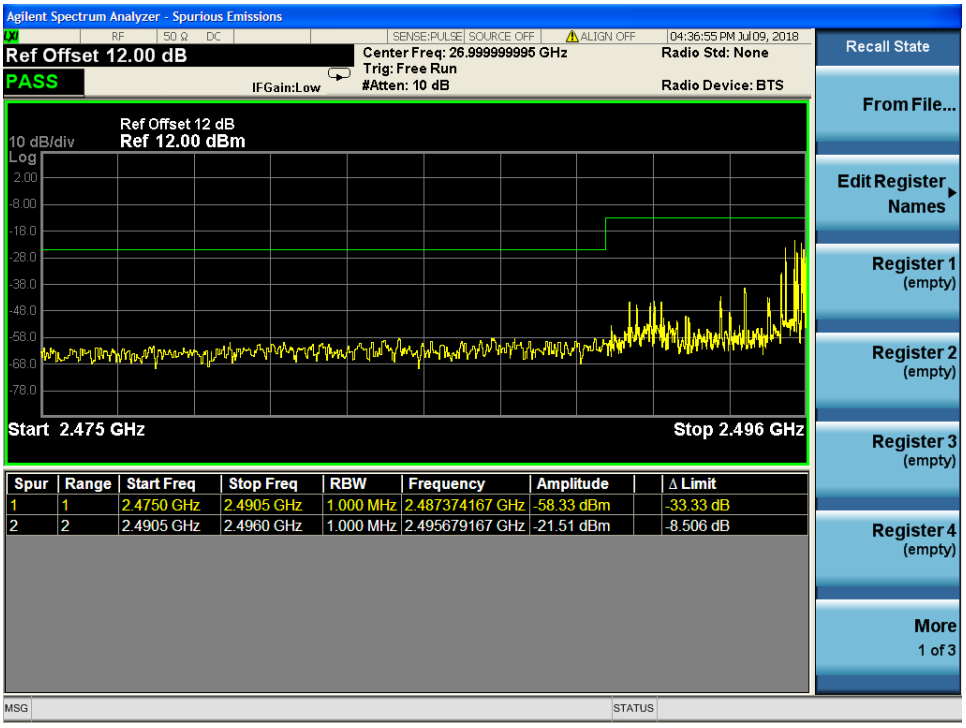


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.5700 GHz	100.0 kHz	2.565300000 GHz	6.041 dBm	-28.96 dB
2	2	2.5700 GHz	2.5710 GHz	120.0 kHz	2.570040000 GHz	-25.64 dBm	-15.64 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571593333 GHz	-11.19 dBm	-1.186 dB
4	4	2.5750 GHz	2.5760 GHz	1.000 MHz	2.575011667 GHz	-25.53 dBm	-12.53 dB
5	5	2.5760 GHz	2.5950 GHz	1.000 MHz	2.576380000 GHz	-30.76 dBm	-5.761 dB

LTE Band 7			
Channel Bandwidth: 10MHz			
Channel	20800	RB Size 1	RB Offset 0

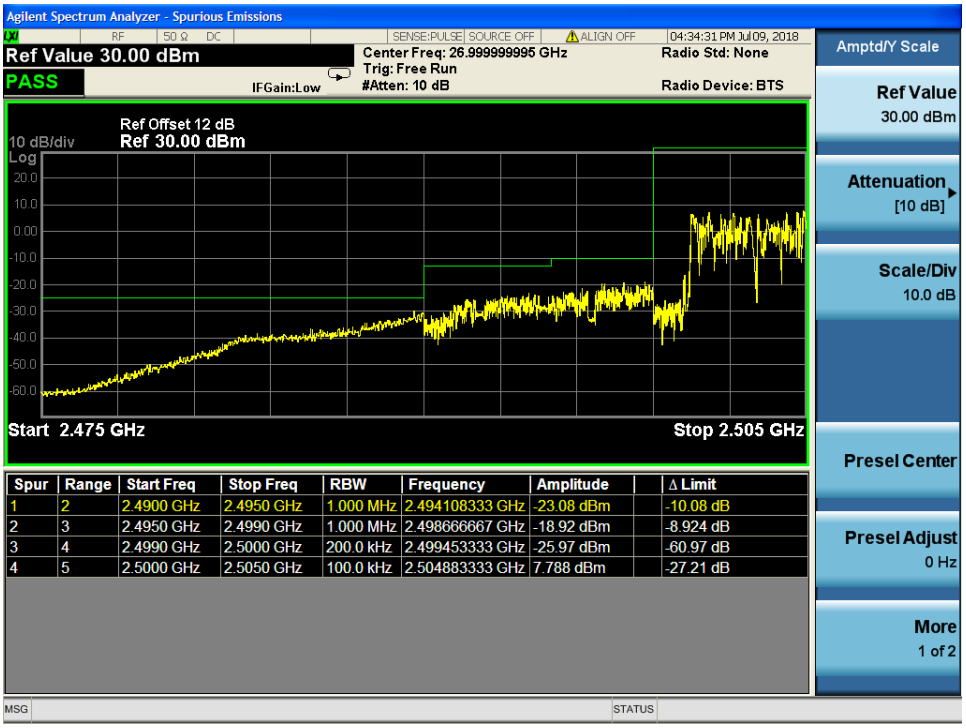


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4900 GHz	2.4950 GHz	1.000 MHz	2.491850000 GHz	-39.95 dBm	-26.95 dB
2	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.496866667 GHz	-15.12 dBm	-5.115 dB
3	4	2.4990 GHz	2.5000 GHz	200.0 kHz	2.499980000 GHz	-33.19 dBm	-68.19 dB
4	5	2.5000 GHz	2.5050 GHz	100.0 kHz	2.500658333 GHz	18.26 dBm	-16.74 dB

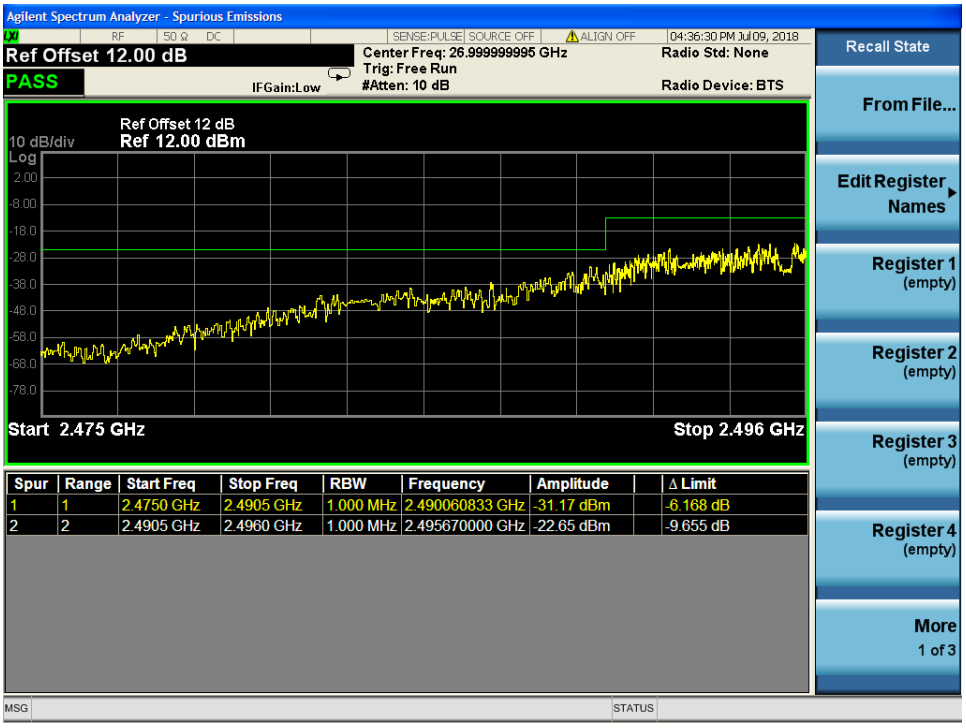


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.487374167 GHz	-58.33 dBm	-33.33 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.495679167 GHz	-21.51 dBm	-8.506 dB

LTE Band 7			
Channel Bandwidth: 10MHz			
Channel	20800	RB Size 50	RB Offset 0

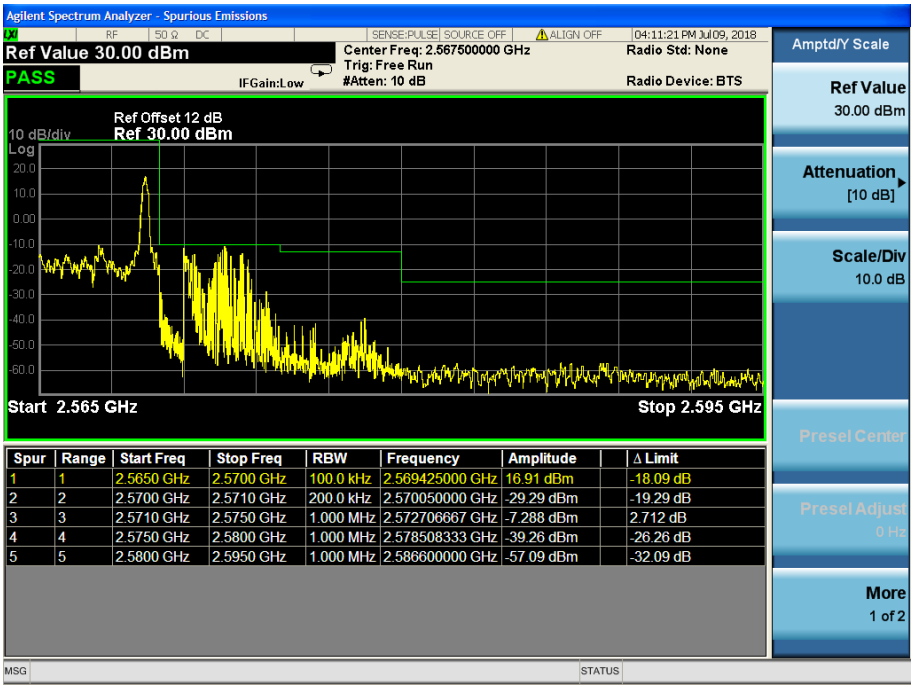


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4900 GHz	2.4950 GHz	1.000 MHz	2.494108333 GHz	-23.08 dBm	-10.08 dB
2	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.498666667 GHz	-18.92 dBm	-8.924 dB
3	4	2.4990 GHz	2.5000 GHz	200.0 kHz	2.499453333 GHz	-25.97 dBm	-60.97 dB
4	5	2.5000 GHz	2.5050 GHz	100.0 kHz	2.504883333 GHz	7.788 dBm	-27.21 dB



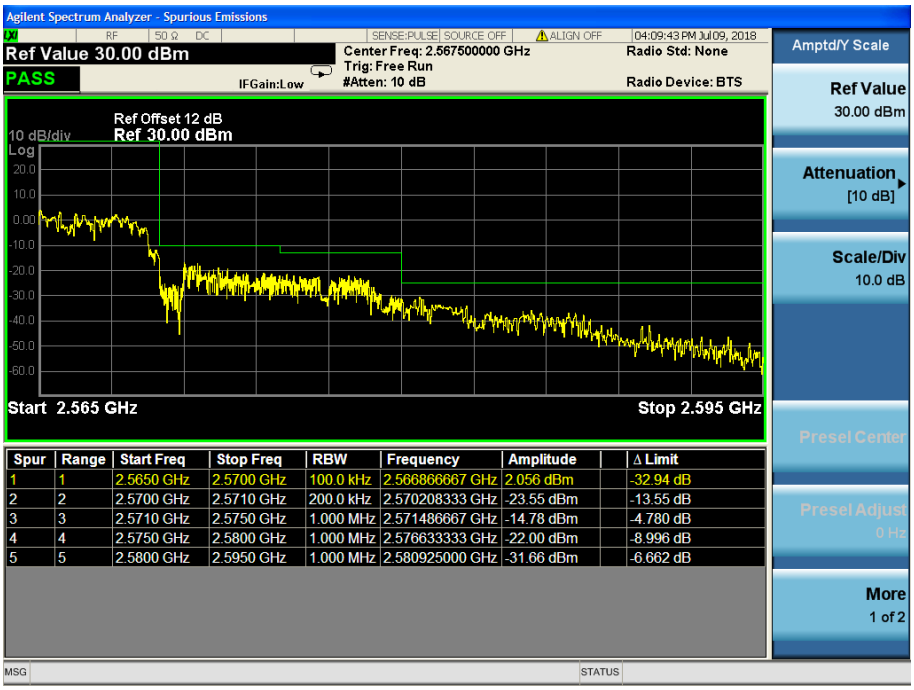
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490060833 GHz	-31.17 dBm	-6.168 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.495670000 GHz	-22.65 dBm	-9.655 dB

LTE Band 7			
Channel Bandwidth: 10MHz			
Channel	21400	RB Size 1	RB Offset 49



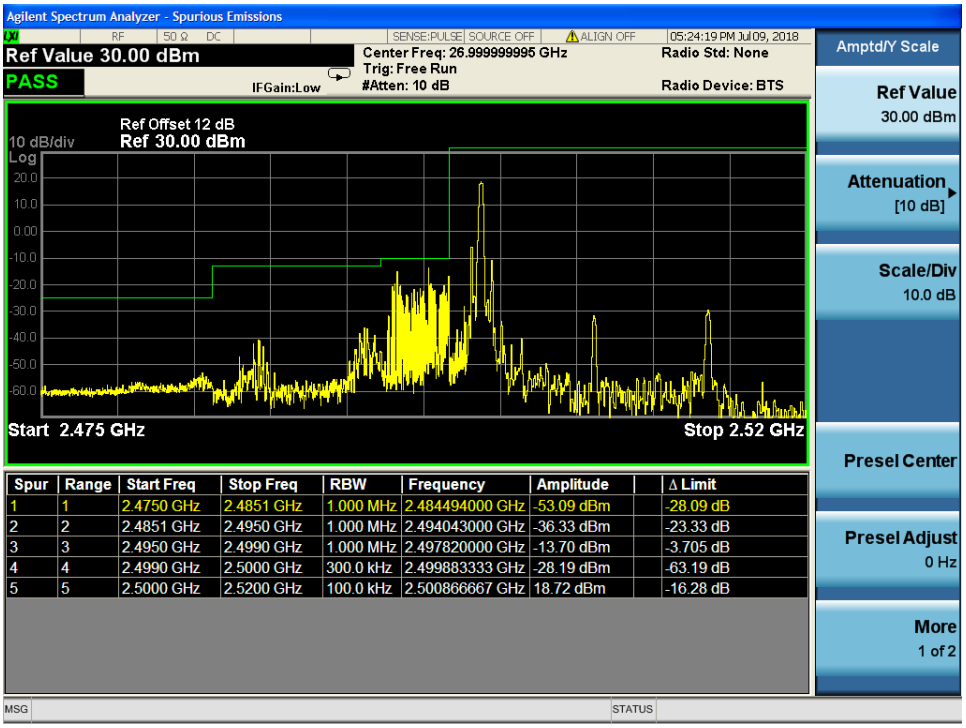
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.5700 GHz	100.0 kHz	2.569425000 GHz	16.91 dBm	-18.09 dB
2	2	2.5700 GHz	2.5710 GHz	200.0 kHz	2.570050000 GHz	-29.29 dBm	-19.29 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.572706667 GHz	-7.288 dBm	2.712 dB
4	4	2.5750 GHz	2.5800 GHz	1.000 MHz	2.578508333 GHz	-39.26 dBm	-26.26 dB
5	5	2.5800 GHz	2.5950 GHz	1.000 MHz	2.586600000 GHz	-57.09 dBm	-32.09 dB

Channel	21400	RB Size 50	RB Offset 0

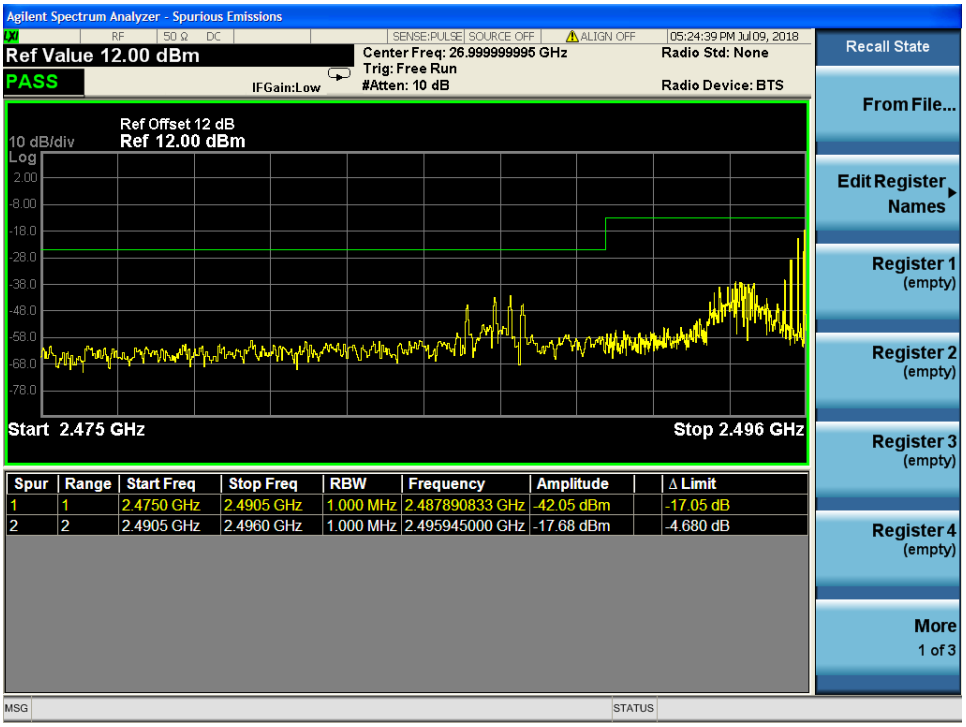


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5650 GHz	2.5700 GHz	100.0 kHz	2.566866667 GHz	2.056 dBm	-32.94 dB
2	2	2.5700 GHz	2.5710 GHz	200.0 kHz	2.570208333 GHz	-23.55 dBm	-13.55 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571486667 GHz	-14.78 dBm	-4.780 dB
4	4	2.5750 GHz	2.5800 GHz	1.000 MHz	2.576633333 GHz	-22.00 dBm	-8.996 dB
5	5	2.5800 GHz	2.5950 GHz	1.000 MHz	2.580925000 GHz	-31.66 dBm	-6.662 dB

LTE Band 7			
Channel Bandwidth: 15MHz			
Channel	20825	RB Size 1	RB Offset 0

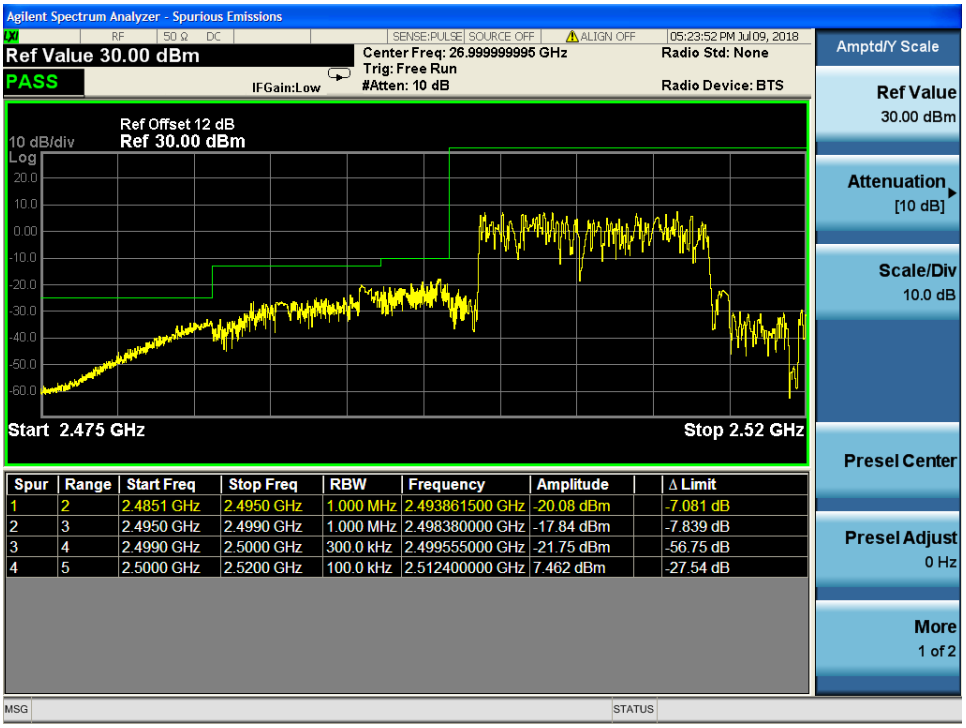


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4851 GHz	1.000 MHz	2.484494000 GHz	-53.09 dBm	-28.09 dB
2	2	2.4851 GHz	2.4950 GHz	1.000 MHz	2.494043000 GHz	-36.33 dBm	-23.33 dB
3	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.497820000 GHz	-13.70 dBm	-3.705 dB
4	4	2.4990 GHz	2.5000 GHz	300.0 kHz	2.499883333 GHz	-28.19 dBm	-63.19 dB
5	5	2.5000 GHz	2.5200 GHz	100.0 kHz	2.500866667 GHz	18.72 dBm	-16.28 dB

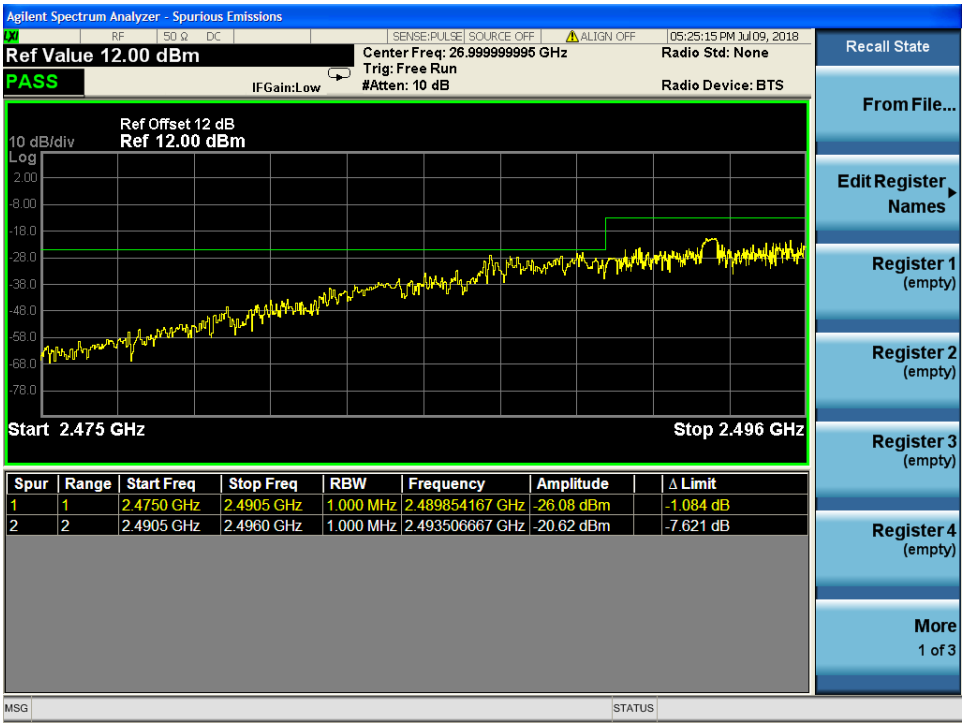


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.487890833 GHz	-42.05 dBm	-17.05 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.495945000 GHz	-17.68 dBm	-4.680 dB

LTE Band 7			
Channel Bandwidth: 15MHz			
Channel	20825	RB Size 75	RB Offset 0

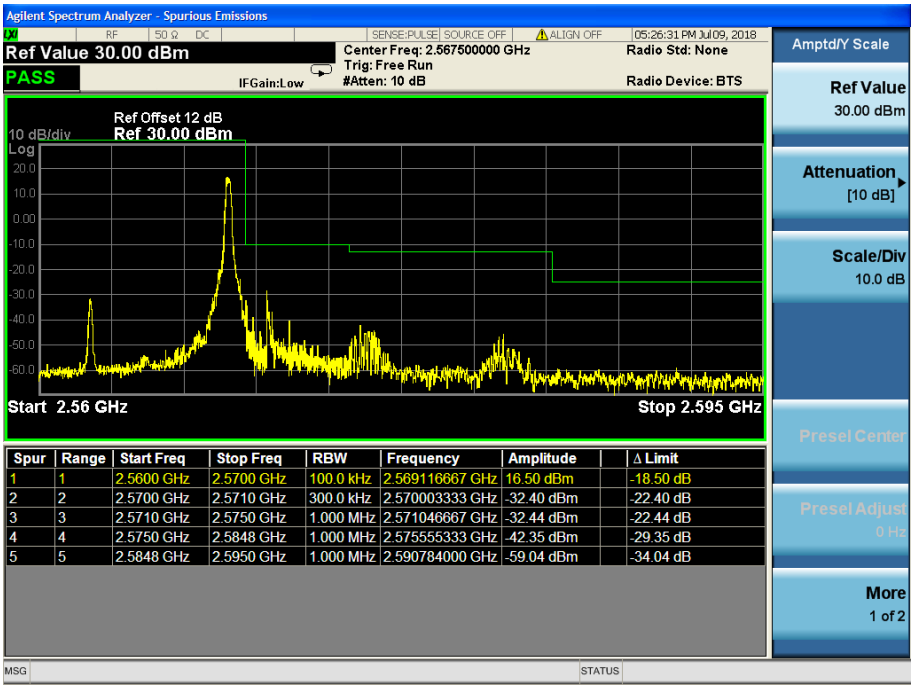


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4851 GHz	2.4950 GHz	1.000 MHz	2.493861500 GHz	-20.08 dBm	-7.081 dB
2	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.498380000 GHz	-17.84 dBm	-7.839 dB
3	4	2.4990 GHz	2.5000 GHz	300.0 kHz	2.499555000 GHz	-21.75 dBm	-56.75 dB
4	5	2.5000 GHz	2.5200 GHz	100.0 kHz	2.512400000 GHz	7.462 dBm	-27.54 dB



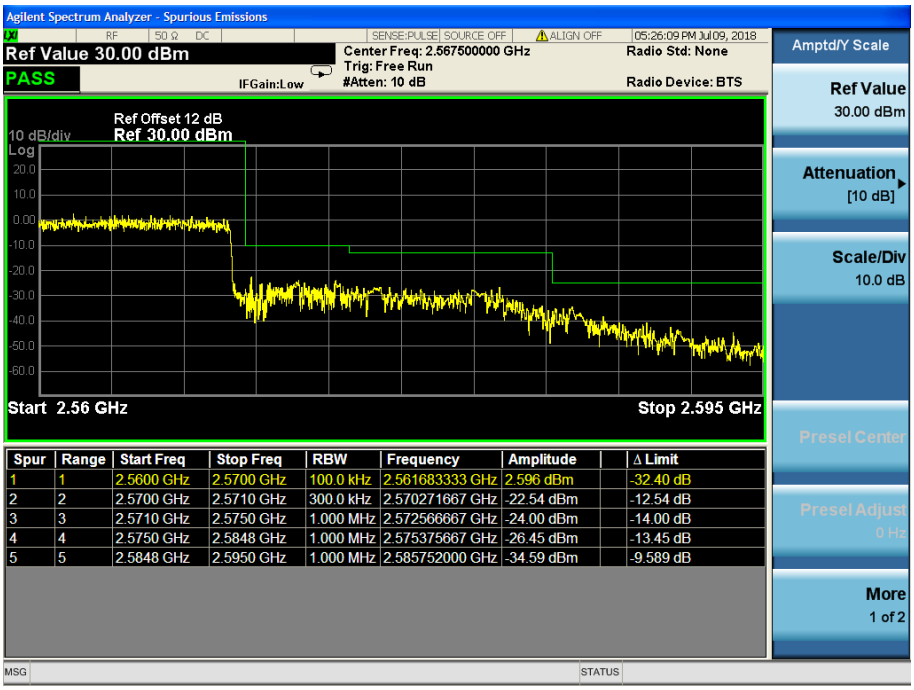
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489854167 GHz	-26.08 dBm	-1.084 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.493506667 GHz	-20.62 dBm	-7.621 dB

LTE Band 7			
Channel Bandwidth: 15MHz			
Channel	21375	RB Size 1	RB Offset 74



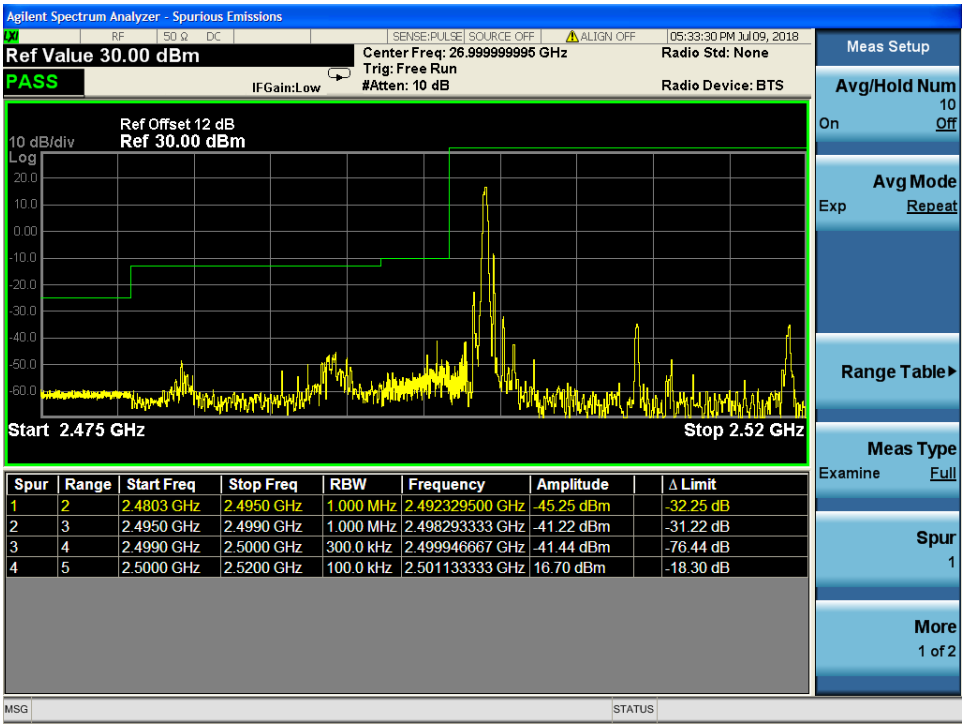
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5600 GHz	2.5700 GHz	100.0 kHz	2.569116667 GHz	16.50 dBm	-18.50 dB
2	2	2.5700 GHz	2.5710 GHz	300.0 kHz	2.570003333 GHz	-32.40 dBm	-22.40 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571046667 GHz	-32.44 dBm	-22.44 dB
4	4	2.5750 GHz	2.5848 GHz	1.000 MHz	2.575555333 GHz	-42.35 dBm	-29.35 dB
5	5	2.5848 GHz	2.5950 GHz	1.000 MHz	2.590784000 GHz	-59.04 dBm	-34.04 dB

Channel	21375	RB Size 75	RB Offset 0

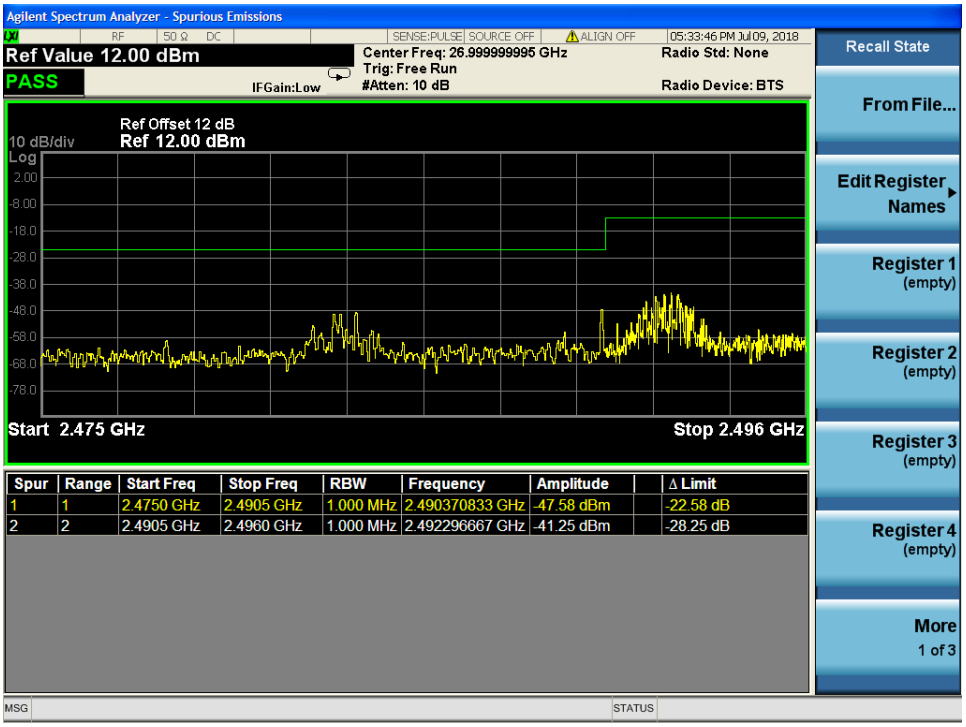


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5600 GHz	2.5700 GHz	100.0 kHz	2.561683333 GHz	2.596 dBm	-32.40 dB
2	2	2.5700 GHz	2.5710 GHz	300.0 kHz	2.570271667 GHz	-22.54 dBm	-12.54 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.572566667 GHz	-24.00 dBm	-14.00 dB
4	4	2.5750 GHz	2.5848 GHz	1.000 MHz	2.575375667 GHz	-26.45 dBm	-13.45 dB
5	5	2.5848 GHz	2.5950 GHz	1.000 MHz	2.585752000 GHz	-34.59 dBm	-9.589 dB

LTE Band 7			
Channel Bandwidth: 20MHz			
Channel	20850	RB Size 1	RB Offset 0

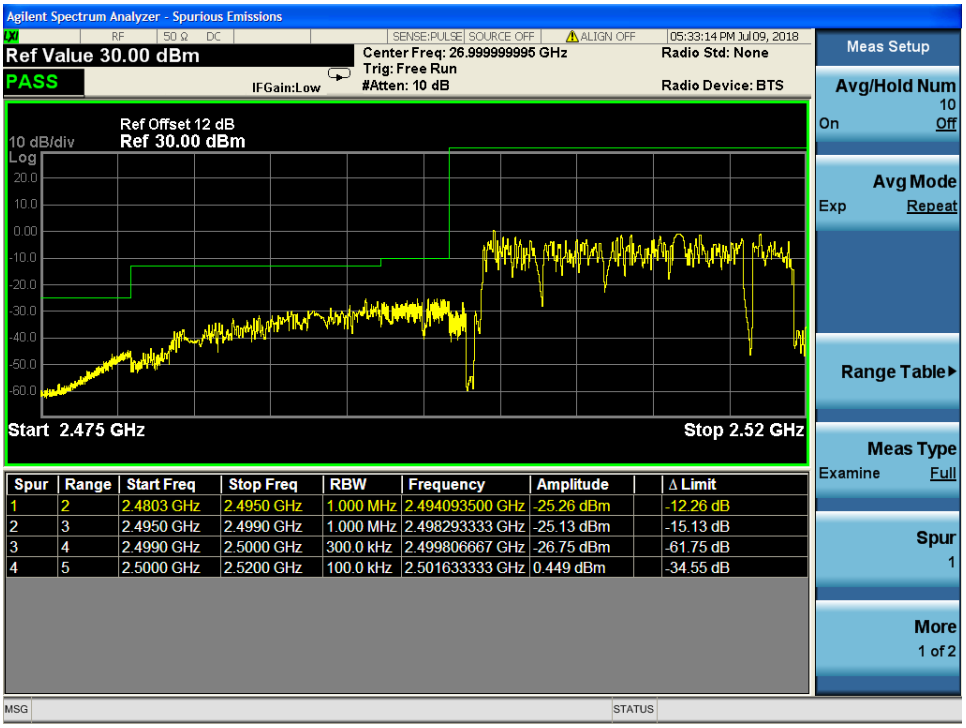


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4803 GHz	2.4950 GHz	1.000 MHz	2.492329500 GHz	-45.25 dBm	-32.25 dB
2	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.498293333 GHz	-41.22 dBm	-31.22 dB
3	4	2.4990 GHz	2.5000 GHz	300.0 kHz	2.499946667 GHz	-41.44 dBm	-76.44 dB
4	5	2.5000 GHz	2.5200 GHz	100.0 kHz	2.501133333 GHz	16.70 dBm	-18.30 dB

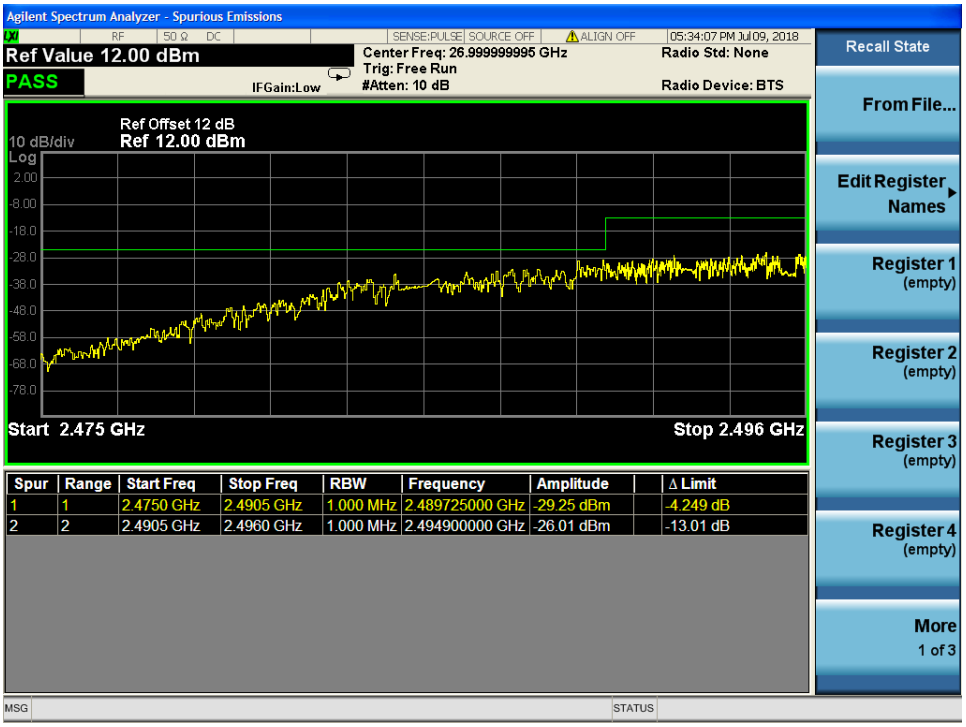


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.490370833 GHz	-47.58 dBm	-22.58 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.492296667 GHz	-41.25 dBm	-28.25 dB

LTE Band 7			
Channel Bandwidth: 20MHz			
Channel	20850	RB Size 100	RB Offset 0

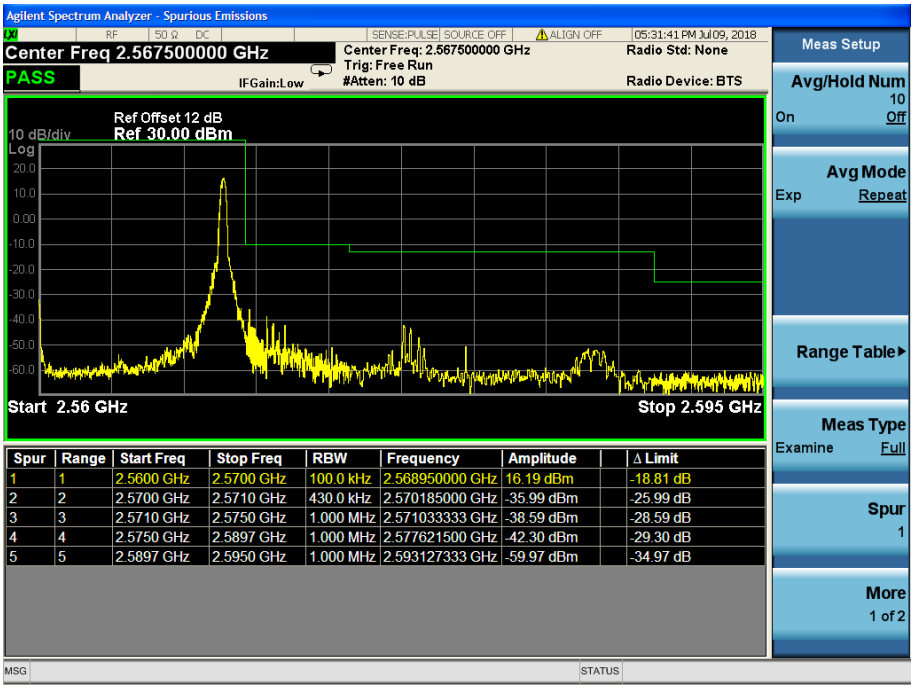


Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	2	2.4803 GHz	2.4950 GHz	1.000 MHz	2.494093500 GHz	-25.26 dBm	-12.26 dB
2	3	2.4950 GHz	2.4990 GHz	1.000 MHz	2.498293333 GHz	-25.13 dBm	-15.13 dB
3	4	2.4990 GHz	2.5000 GHz	300.0 kHz	2.499806667 GHz	-26.75 dBm	-61.75 dB
4	5	2.5000 GHz	2.5200 GHz	100.0 kHz	2.501633333 GHz	0.449 dBm	-34.55 dB



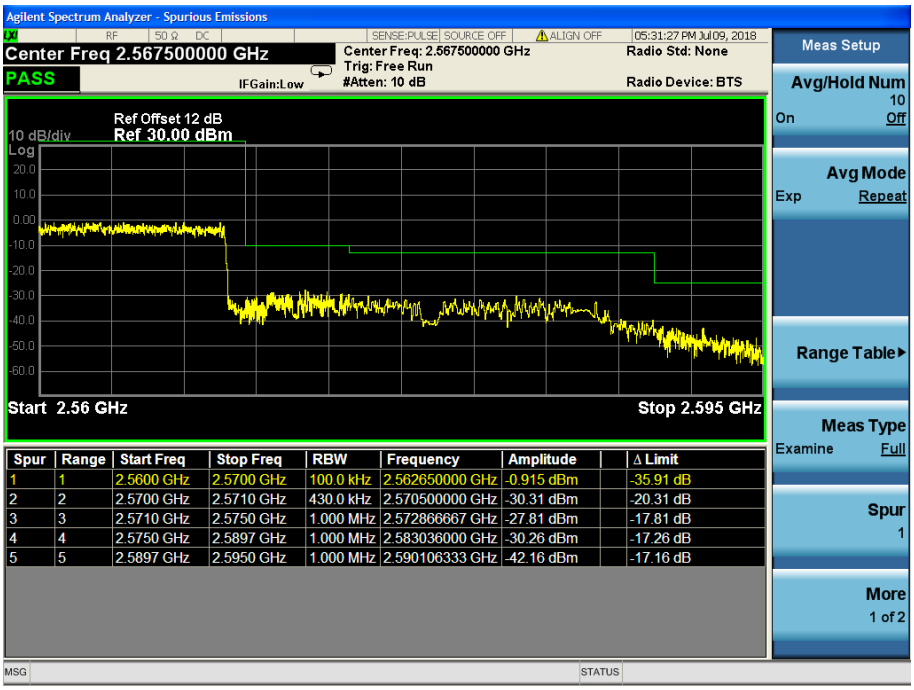
Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.4750 GHz	2.4905 GHz	1.000 MHz	2.489725000 GHz	-29.25 dBm	-4.249 dB
2	2	2.4905 GHz	2.4960 GHz	1.000 MHz	2.494900000 GHz	-26.01 dBm	-13.01 dB

LTE Band 7			
Channel Bandwidth: 20MHz			
Channel	21350	RB Size 1	RB Offset 99



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5600 GHz	2.5700 GHz	100.0 kHz	2.568950000 GHz	16.19 dBm	-18.81 dB
2	2	2.5700 GHz	2.5710 GHz	430.0 kHz	2.570185000 GHz	-35.99 dBm	-25.99 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.571033333 GHz	-38.59 dBm	-28.59 dB
4	4	2.5750 GHz	2.5897 GHz	1.000 MHz	2.577621500 GHz	-42.30 dBm	-29.30 dB
5	5	2.5897 GHz	2.5950 GHz	1.000 MHz	2.593127333 GHz	-59.97 dBm	-34.97 dB

Channel	21350	RB Size 100	RB Offset 0



Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.5600 GHz	2.5700 GHz	100.0 kHz	2.562650000 GHz	-0.915 dBm	-35.91 dB
2	2	2.5700 GHz	2.5710 GHz	430.0 kHz	2.570500000 GHz	-30.31 dBm	-20.31 dB
3	3	2.5710 GHz	2.5750 GHz	1.000 MHz	2.572866667 GHz	-27.81 dBm	-17.81 dB
4	4	2.5750 GHz	2.5897 GHz	1.000 MHz	2.583036000 GHz	-30.26 dBm	-17.26 dB
5	5	2.5897 GHz	2.5950 GHz	1.000 MHz	2.590106333 GHz	-42.16 dBm	-17.16 dB

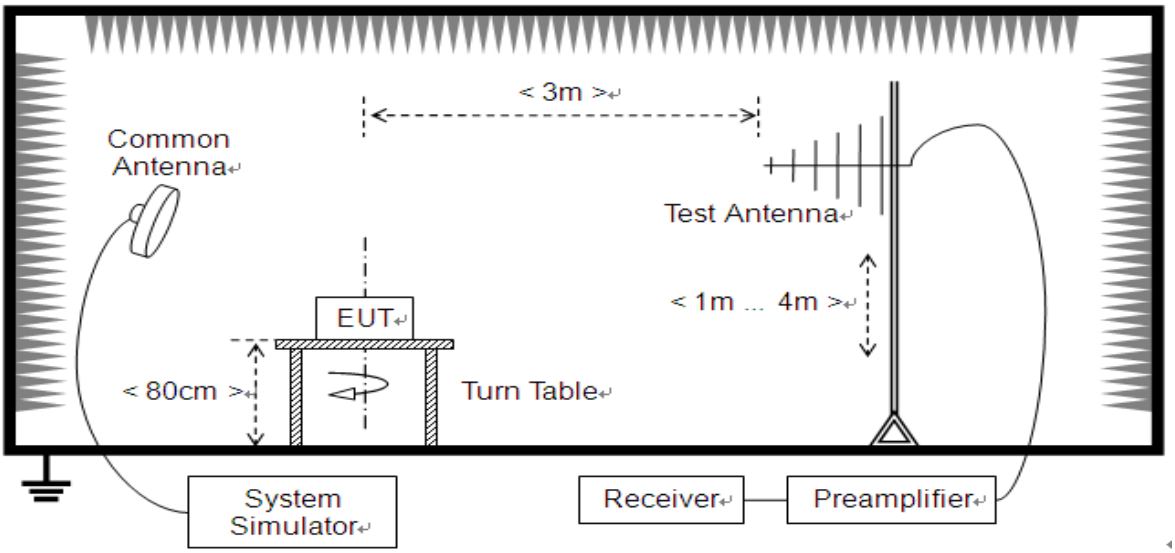
2.7. Transmitter Radiated Power (EIRP/ERP)

2.7.1. Requirement

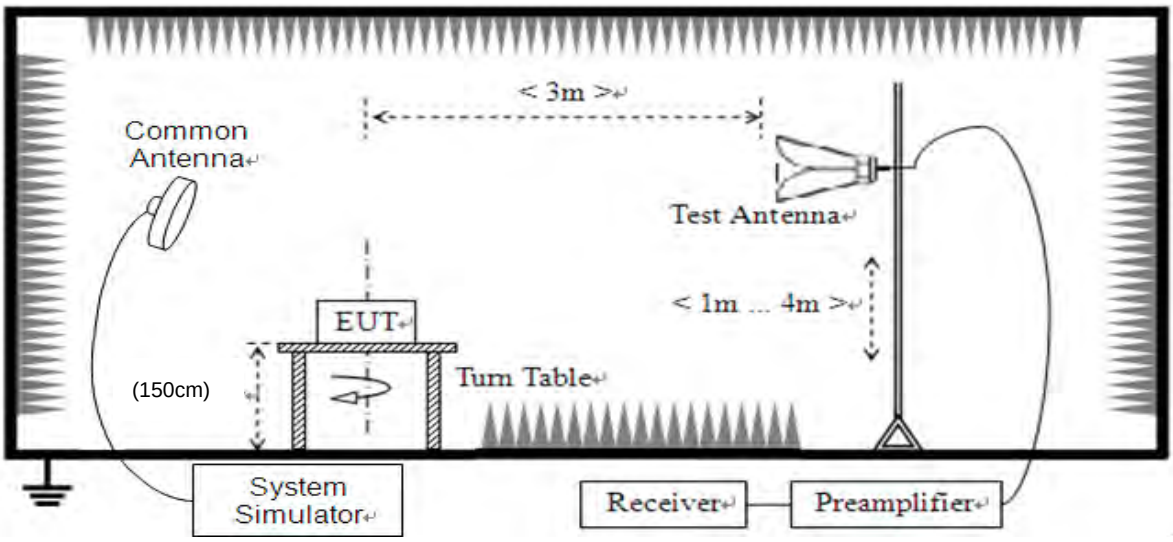
According to FCC section 24.232 (c) for LTE Band 2, Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.
According to FCC section 27.50 (d) for LTE Band 4, fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat EIRP.
According to FCC section 27.50 (h) for LTE Band 7, Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.
According to FCC section 27.50 (c) for LTE Band 12/17, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts ERP.

2.7.2. Test Description

Test Setup:
1) Below 1GHz



2) Above 1GHz



The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.
A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.
In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360°to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

2.7.3. Test procedure

KDB 971168 D01v03 Section 51&5.2 and ANSI/TIA-603-E-2016.

2.7.4. Test Result

The EUT was verified under all configurations (RB size and offset) and the worst case radiated power reported for each modulation/channel bandwidth.

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

$A_{SUBST} = P_{SUBST_TX} - P_{SUBST_RX} - L_{SUBST_CABLES} + G_{SUBST_TX_ANT}$

$A_{TOT} = L_{CABLES} + A_{SUBST}$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST_TX_ANT}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT}.

Note: Both horizontal and vertical polarizations of the test antenna are evaluated respectively, only the worst data (horizontal) were recorded in this report.

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	20MHz	L 18700	1860	QPSK	1	0	22.63
					100	0	21.96
				16-QAM	1	0	22.49
					100	0	21.37
		M 18900	1880	QPSK	1	0	22.30
					100	0	21.74
				16-QAM	1	0	21.90
					100	0	22.15
		H 19100	1900	QPSK	1	0	22.33
					100	0	21.86
				16-QAM	1	0	21.86
					100	0	20.77
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	15MHz	L 18675	1857.5	QPSK	1	0	23.4
					75	0	22.21
				16-QAM	1	0	22.12
					75	0	21.81
		M 18900	1880	QPSK	1	0	22.47
					75	0	22.34
				16-QAM	1	0	22.74
					75	0	22.41
		H 19125	1902.5	QPSK	1	0	22.76
					75	0	22.36
				16-QAM	1	0	22.91
					75	0	22.62
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	10MHz	L 18650	1855	QPSK	1	0	23.21
					50	0	21.68
				16-QAM	1	0	22.55
					50	0	20.27
		M 18900	1880	QPSK	1	0	22.58
					50	0	21.65
				16-QAM	1	0	22.12
					50	0	20.8
		H 19150	1905	QPSK	1	0	23.04
					50	0	21.88
				16-QAM	1	0	21.94
					50	0	20.88

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	5MHz	L 18625	1852.5	QPSK	1	0	23.37
					25	0	23.11
				16-QAM	1	0	23.44
					25	0	22.83
		M 18900	1880	QPSK	1	0	23.05
					25	0	22.23
				16-QAM	1	0	23.09
					25	0	22.61
		H 19175	1907.5	QPSK	1	0	22.96
					25	0	22.06
				16-QAM	1	0	22.52
					25	0	22.23
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	3MHz	L 18615	1851.5	QPSK	1	0	22.78
					15	0	21.66
				16-QAM	1	0	22.46
					15	0	20.75
		M 18900	1880	QPSK	1	0	22.72
					15	0	21.88
				16-QAM	1	0	21.84
					15	0	20.67
		H 19185	1908.5	QPSK	1	0	22.94
					15	0	22.07
				16-QAM	1	0	21.86
					15	0	20.51
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 2	1.4MHz	L 18607	1850.7	QPSK	1	0	23.15
					6	0	23.18
				16-QAM	1	0	22.33
					6	0	21.28
		18900	1880	QPSK	1	0	23.05
					6	0	22.43
				16-QAM	1	0	22.34
					6	0	21.37
		H 19193	1909.3	QPSK	1	0	23.35
					6	0	22.62
				16-QAM	1	0	22.68
					6	0	21.86

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	20MHz	L 20050	1720.0	QPSK	1	0	22.88
					100	0	22.39
				16-QAM	1	0	22.89
					100	0	21.46
		M 20175	1732.5	QPSK	1	0	23.21
					100	0	22.37
				16-QAM	1	0	22.42
					100	0	21.44
		H 20300	1745.0	QPSK	1	0	23.49
					100	0	22.48
				16-QAM	1	0	22.62
					100	0	21.31
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	15MHz	L 20025	1717.5	QPSK	1	0	22.87
					75	0	21.75
				16-QAM	1	0	22.1
					75	0	20.66
		M 20175	1732.5	QPSK	1	0	23.17
					75	0	21.63
				16-QAM	1	0	21.93
					75	0	20.75
		H 20325	1747.5	QPSK	1	0	23.16
					75	0	21.79
				16-QAM	1	0	21.81
					75	0	20.75
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	10MHz	L 20000	1715.0	QPSK	1	0	22.92
					50	0	21.74
				16-QAM	1	0	22.22
					50	0	20.63
		M 20175	1732.5	QPSK	1	0	22.82
					50	0	21.81
				16-QAM	1	0	21.94
					50	0	20.67
		H 20350	1750.0	QPSK	1	0	22.52
					50	0	21.74
				16-QAM	1	0	21.69
					50	0	21.53

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	5MHz	L 19975	1712.5	QPSK	1	0	23.02
					25	0	22.18
				16-QAM	1	0	22.03
					25	0	22.13
		M 20175	1732.5	QPSK	1	0	22.22
					25	0	21.68
				16-QAM	1	0	21.92
					25	0	22.8
		H 20375	1752.5	QPSK	1	0	22.68
					25	0	22.24
				16-QAM	1	0	21.89
					25	0	23.05
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	3MHz	L 19965	1711.5	QPSK	1	0	23.13
					15	0	21.87
				16-QAM	1	0	22.26
					15	0	20.91
		M 20175	1732.5	QPSK	1	0	22.85
					15	0	21.90
				16-QAM	1	0	21.82
					15	0	21.00
		H 20385	1753.5	QPSK	1	0	22.52
					15	0	21.71
				16-QAM	1	0	21.52
					15	0	21.36
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 4	1.4MHz	L 19957	1710.7	QPSK	1	0	23.06
					6	0	22.62
				16-QAM	1	0	22.45
					6	0	21.3
		M 20175	1732.5	QPSK	1	0	22.85
					6	0	21.75
				16-QAM	1	0	21.83
					6	0	20.83
		H 20393	1754.3	QPSK	1	0	22.49
					6	0	21.51
				16-QAM	1	0	21.78
					6	0	20.84

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 7	20MHz	L 20850	2510	QPSK	1	0	21.70
					100	0	21.93
				16-QAM	1	0	20.80
					100	0	21.27
		M 21100	2535	QPSK	1	0	23.94
					100	0	22.05
				16-QAM	1	0	22.82
					100	0	21.26
		H 21350	2560	QPSK	1	0	22.84
					100	0	22.38
				16-QAM	1	0	22.50
					100	0	21.72
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 7	15MHz	L 20825	2507.5	QPSK	1	0	21.22
					75	0	21.50
				16-QAM	1	0	20.71
					75	0	20.56
		M 21100	2535	QPSK	1	0	22.97
					75	0	21.75
				16-QAM	1	0	22.57
					75	0	20.98
		H 21375	2562.5	QPSK	1	0	23.74
					75	0	22.08
				16-QAM	1	0	22.51
					75	0	21.58
Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 7	10MHz	L 20800	2505	QPSK	1	0	21.33
					50	0	21.84
				16-QAM	1	0	22.35
					50	0	20.75
		M 21100	2535	QPSK	1	0	22.94
					50	0	21.88
				16-QAM	1	0	21.74
					50	0	21.36
		H 21400	2565	QPSK	1	0	22.52
					50	0	21.72
				16-QAM	1	0	21.39
					50	0	21.39

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		EIRP
					RB Size	RB Offset	(dBm)
LTE Band 7	5MHz	L 20775	2502.5	QPSK	1	0	21.47
					25	0	20.88
				16-QAM	1	0	21.60
					25	0	20.15
		M 21100	2535	QPSK	1	0	21.66
					25	0	21.61
				16-QAM	1	0	22.02
					25	0	20.89
		H 21425	2567.5	QPSK	1	0	21.90
					25	0	20.98
				16-QAM	1	0	22.36
					25	0	20.59

2.8. Radiated Spurious Emissions

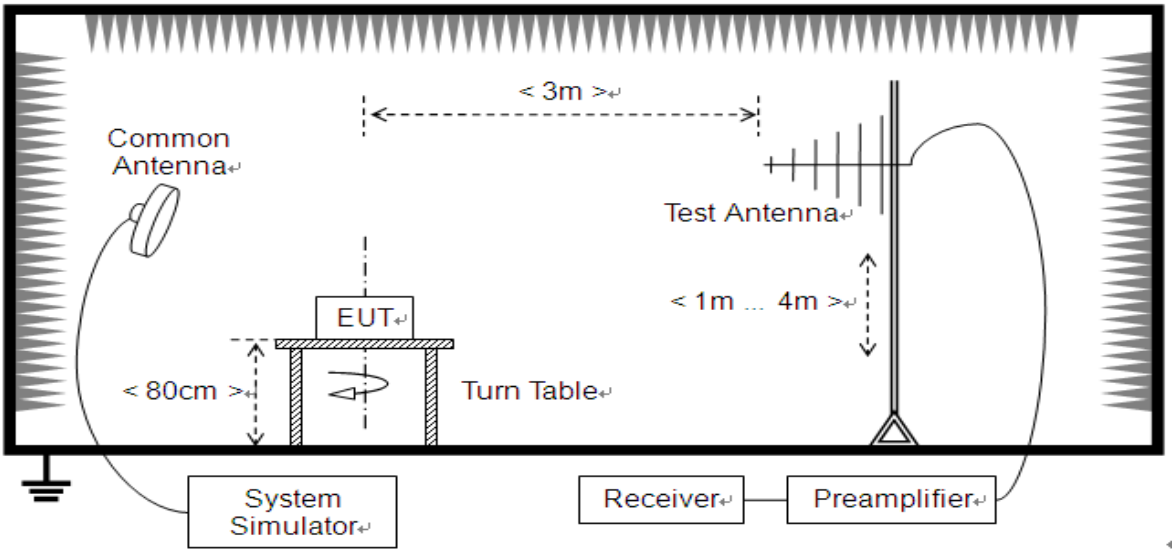
2.8.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

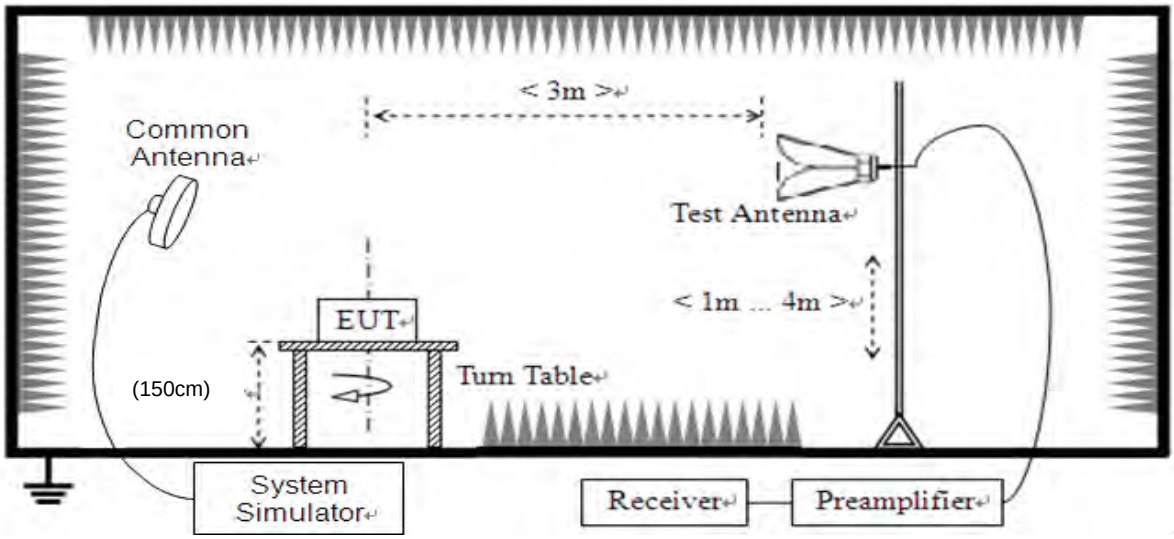
Additional requirement for LTE Band 7:
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 55 + 10 log(P) dB. This calculated to be -25dBm.

2.8.2. Test Description

Test Setup:
1) Below 1GHz



2) Above 1GHz



The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360°to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3. Test procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

2.8.4. Test Result

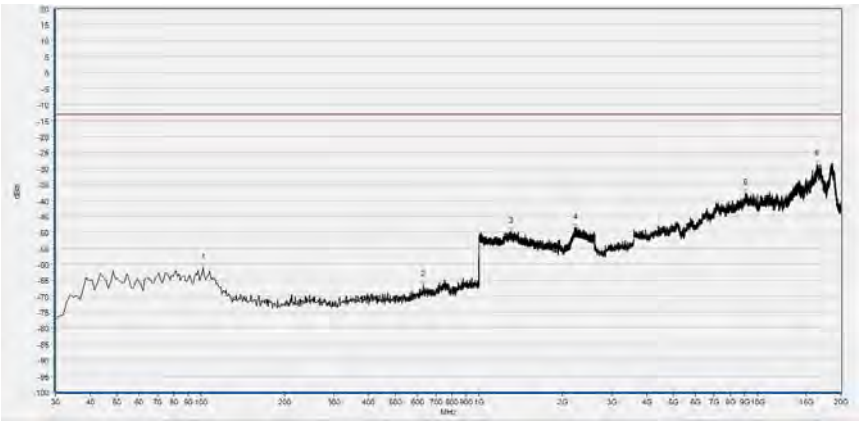
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. Test Antenna height is varied from 1m to 4m above the ground, and the Turn Table is actuated to turn from 0° to 360°, both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

Note1: The power of the EUT transmitting frequency should be ignored.

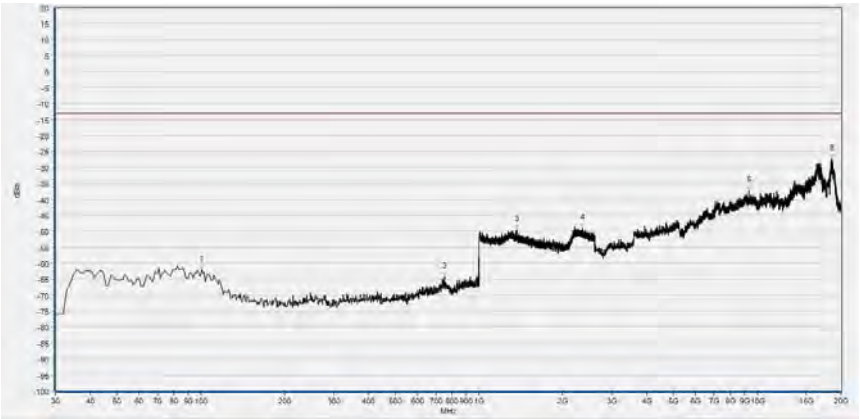
Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and test channel were considered and evaluated respectively by performing full test for each band, only the worst cases were recorded in this test report.

LTE Band 2 20MHz BW, Low Channel, QPSK

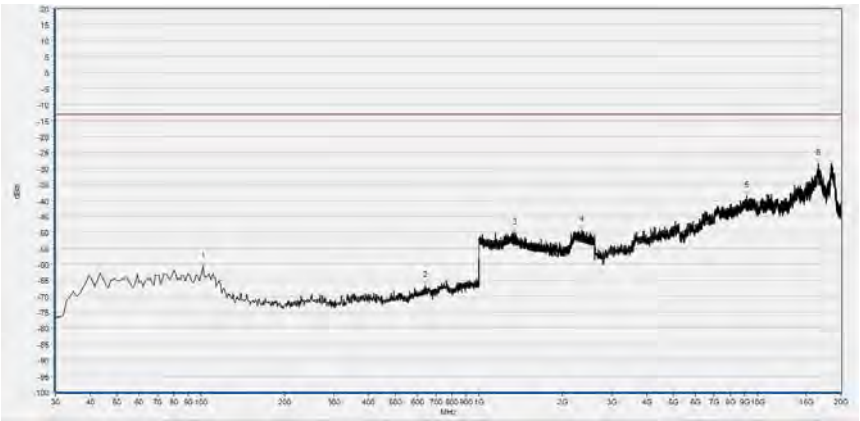


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	101.780	-61.09	-13.00	Horizontal	PASS
2	631.400	-66.44	-13.00	Horizontal	PASS
3	1302.841	-49.79	-13.00	Horizontal	PASS
4	2217.767	-48.59	-13.00	Horizontal	PASS
5	9080.887	-37.66	-13.00	Horizontal	PASS
6	16404.983	-28.65	-13.00	Horizontal	PASS

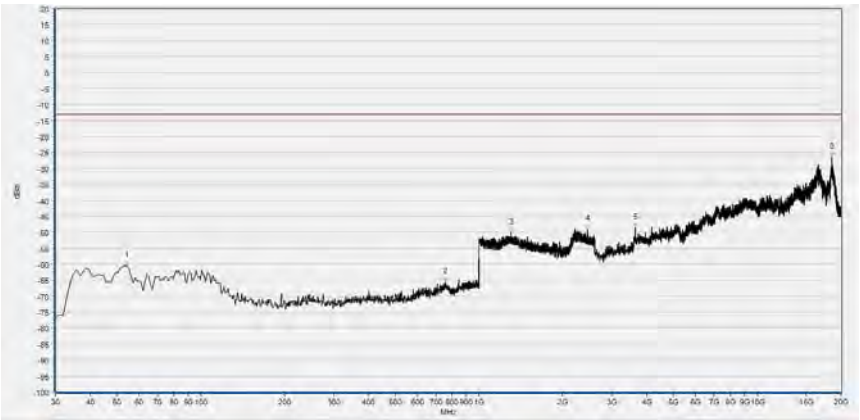


No.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	100.810	-62.11	-13.00	Vertical	PASS
2	751.680	-64.36	-13.00	Vertical	PASS
3	1368.788	-49.41	-13.00	Vertical	PASS
4	2351.581	-49.11	-13.00	Vertical	PASS
5	9317.149	-37.19	-13.00	Vertical	PASS
6	18474.304	-27.28	-13.00	Vertical	PASS

LTE Band 2 20MHz BW, Low Channel, 16QAM

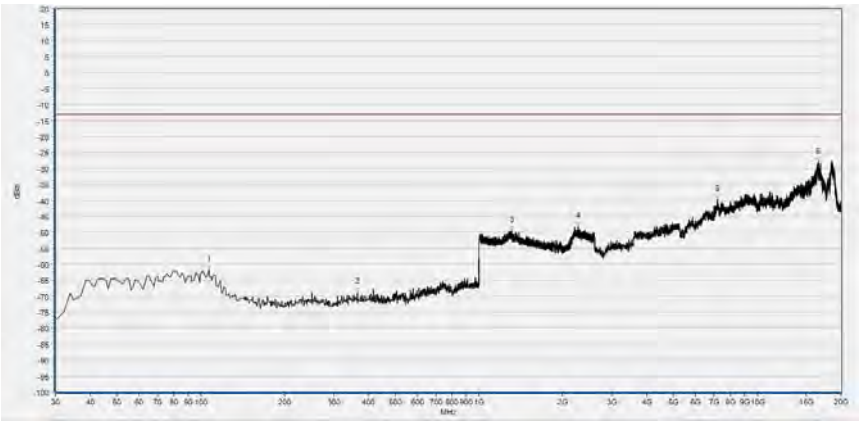


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	101.780	-60.63	-13.00	Horizontal	PASS
2	640.130	-66.61	-13.00	Horizontal	PASS
3	1343.177	-50.24	-13.00	Horizontal	PASS
4	2335.574	-49.19	-13.00	Horizontal	PASS
5	9141.989	-38.60	-13.00	Horizontal	PASS
6	16527.187	-28.56	-13.00	Horizontal	PASS

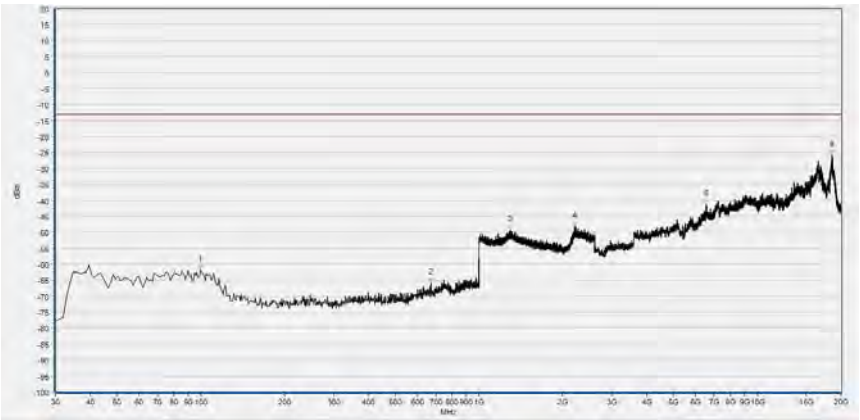


Num.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	54.250	-60.46	-13.00	Vertical	PASS
2	756.530	-65.61	-13.00	Vertical	PASS
3	1302.201	-50.17	-13.00	Vertical	PASS
4	2459.144	-49.16	-13.00	Vertical	PASS
5	3638.734	-48.54	-13.00	Vertical	PASS
6	18470.231	-26.39	-13.00	Vertical	PASS

LTE Band 2 20MHz BW, Mid Channel, QPSK

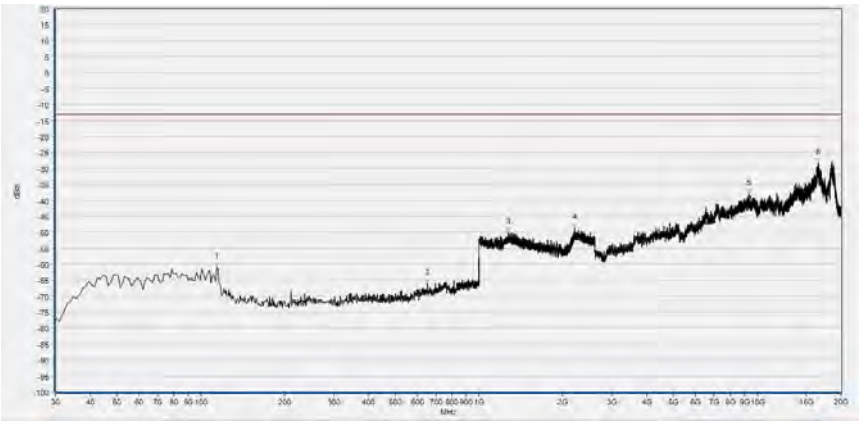


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	106.630	-61.69	-13.00	Horizontal	PASS
2	365.620	-68.66	-13.00	Horizontal	PASS
3	1308.603	-49.46	-13.00	Horizontal	PASS
4	2276.671	-48.23	-13.00	Horizontal	PASS
5	7178.578	-39.61	-13.00	Horizontal	PASS
6	16527.187	-27.99	-13.00	Horizontal	PASS

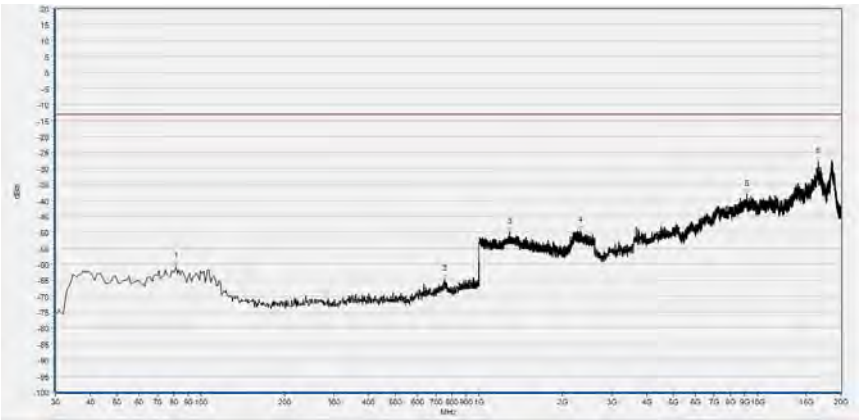


No.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	99.840	-61.76	-13.00	Vertical	PASS
2	671.170	-65.75	-13.00	Vertical	PASS
3	1293.237	-49.28	-13.00	Vertical	PASS
4	2206.883	-48.26	-13.00	Vertical	PASS
5	6543.117	-41.31	-13.00	Vertical	PASS
6	18567.994	-25.79	-13.00	Vertical	PASS

LTE Band 2 20MHz BW, Mid Channel, 16QAM

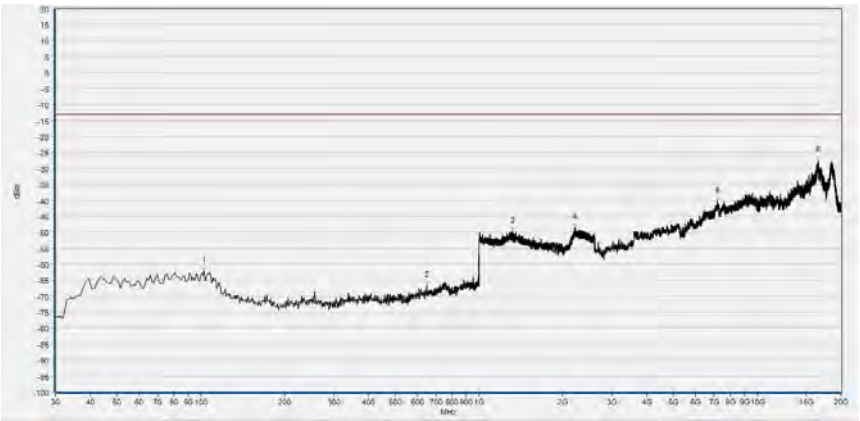


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	114.390	-60.80	-13.00	Horizontal	PASS
2	652.740	-66.07	-13.00	Horizontal	PASS
3	1275.310	-49.87	-13.00	Horizontal	PASS
4	2208.804	-48.50	-13.00	Horizontal	PASS
5	9304.928	-37.98	-13.00	Horizontal	PASS
6	16523.113	-28.25	-13.00	Horizontal	PASS

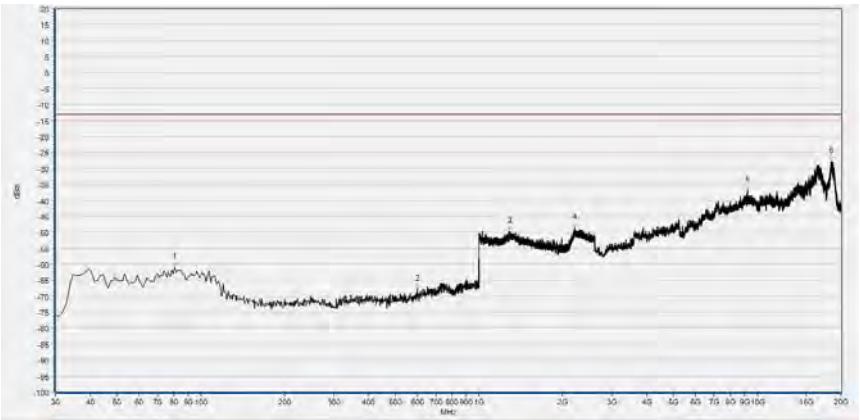


Num.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	81.410	-60.76	-13.00	Vertical	PASS
2	751.680	-64.77	-13.00	Vertical	PASS
3	1287.475	-50.04	-13.00	Vertical	PASS
4	2312.525	-49.49	-13.00	Vertical	PASS
5	9150.136	-38.15	-13.00	Vertical	PASS
6	16519.040	-27.78	-13.00	Vertical	PASS

LTE Band 2 20MHz BW, High Channel, QPSK

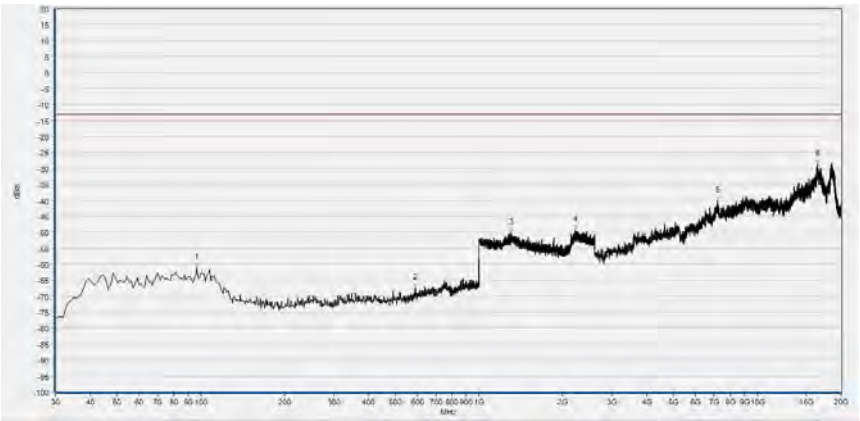


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	102.750	-62.06	-13.00	Horizontal	PASS
2	647.890	-66.68	-13.00	Horizontal	PASS
3	1319.488	-49.83	-13.00	Horizontal	PASS
4	2208.804	-48.53	-13.00	Horizontal	PASS
5	7190.798	-40.44	-13.00	Horizontal	PASS
6	16535.334	-27.64	-13.00	Horizontal	PASS

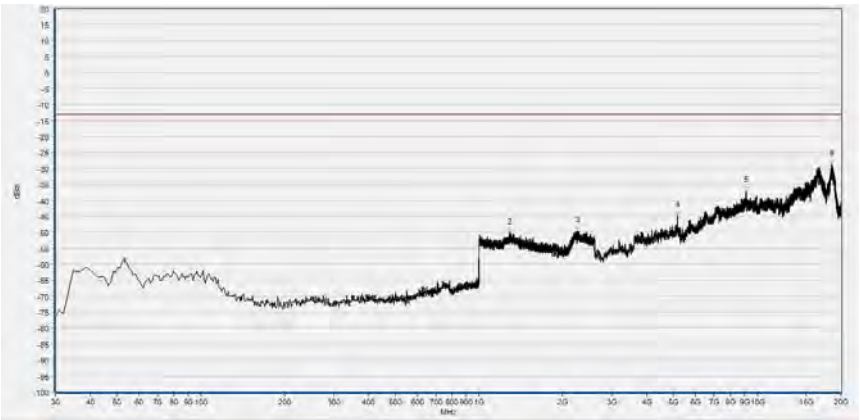


No.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	80.440	-61.00	-13.00	Vertical	PASS
2	602.300	-67.83	-13.00	Vertical	PASS
3	1286.835	-49.67	-13.00	Vertical	PASS
4	2211.365	-48.70	-13.00	Vertical	PASS
5	9203.091	-36.84	-13.00	Vertical	PASS
6	18449.864	-27.72	-13.00	Vertical	PASS

LTE Band 2 20MHz BW, High Channel, 16QAM

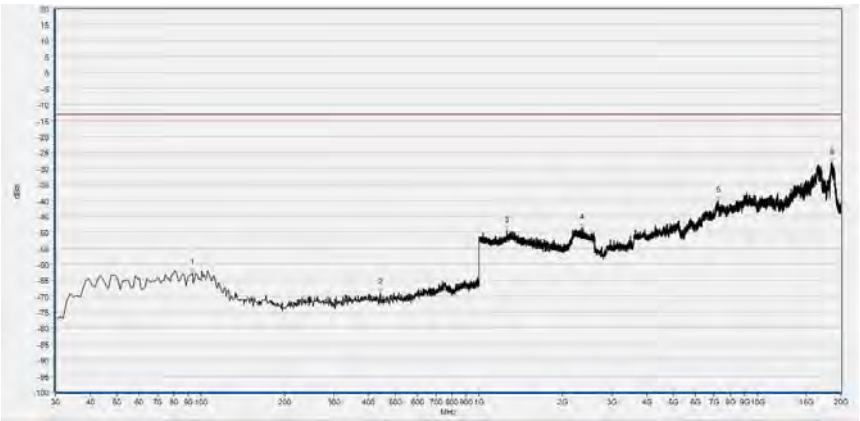


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	96.930	-61.10	-13.00	Horizontal	PASS
2	588.720	-67.29	-13.00	Horizontal	PASS
3	1300.920	-50.16	-13.00	Horizontal	PASS
4	2219.688	-49.32	-13.00	Horizontal	PASS
5	7178.578	-40.18	-13.00	Horizontal	PASS
6	16462.011	-28.76	-13.00	Horizontal	PASS

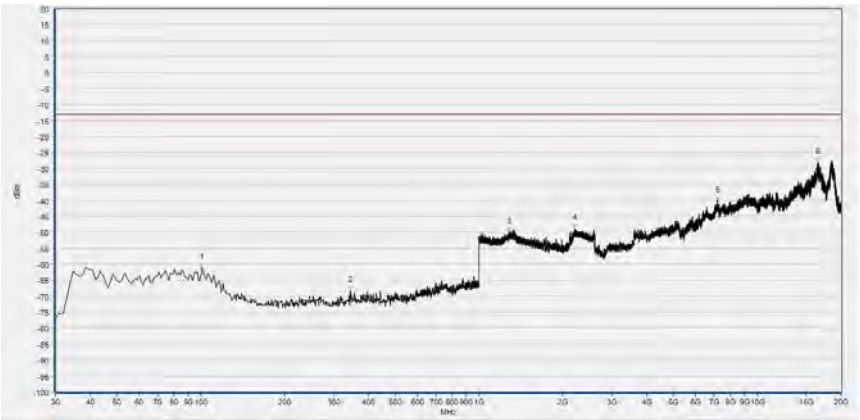


Num.	Freq(MHz)	Peak	limit PK	Antenna	Verdict
1	53.280	-59.05	-13.00	Vertical	PASS
2	1286.194	-50.27	-13.00	Vertical	PASS
3	2251.701	-49.50	-13.00	Vertical	PASS
4	5154.064	-44.86	-13.00	Vertical	PASS
5	9125.696	-37.01	-13.00	Vertical	PASS
6	18474.304	-28.73	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, Low Channel, QPSK

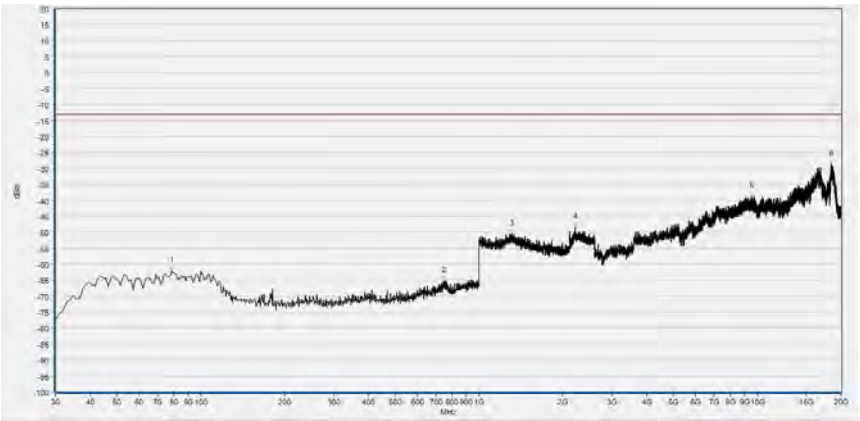


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	93.113	-62.69	-13.00	Horizontal	PASS
2	442.663	-69.04	-13.00	Horizontal	PASS
3	1256.128	-49.47	-13.00	Horizontal	PASS
4	2335.068	-48.60	-13.00	Horizontal	PASS
5	7243.674	-40.20	-13.00	Horizontal	PASS
6	18549.758	-28.27	-13.00	Horizontal	PASS

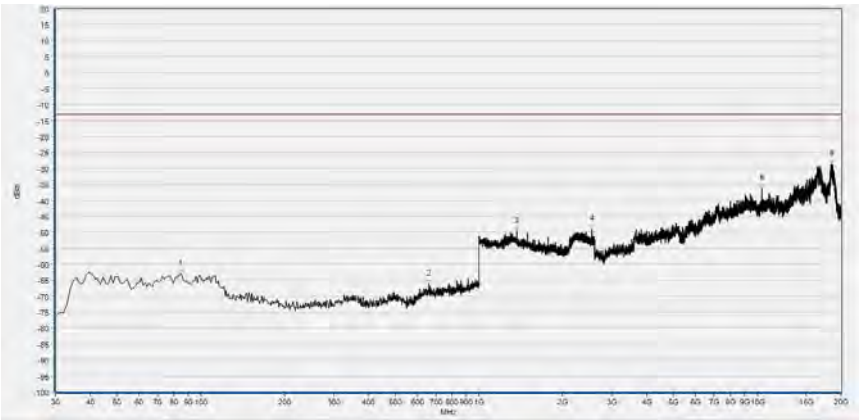


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	100.881	-61.01	-13.00	Vertical	PASS
2	344.595	-68.38	-13.00	Vertical	PASS
3	1277.739	-49.92	-13.00	Vertical	PASS
4	2207.004	-48.78	-13.00	Vertical	PASS
5	7194.366	-40.19	-13.00	Vertical	PASS
6	16533.922	-28.14	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, Low Channel, 16QAM

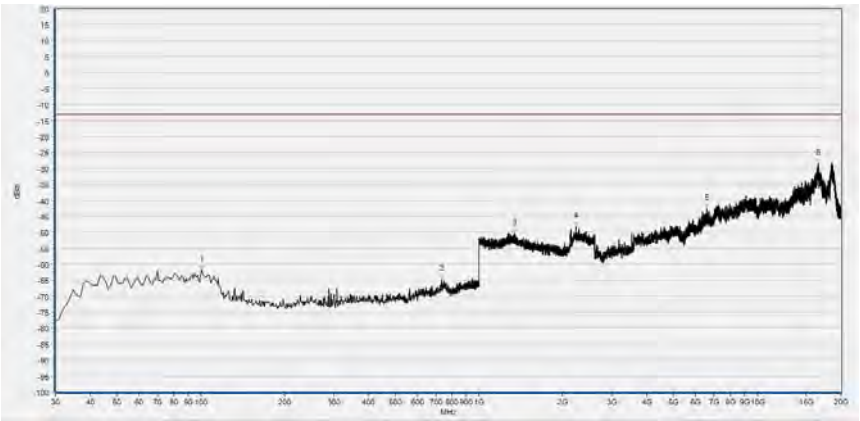


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	78.549	-61.97	-13.00	Horizontal	PASS
2	746.577	-65.25	-13.00	Horizontal	PASS
3	1307.354	-50.72	-13.00	Horizontal	PASS
4	2212.606	-48.37	-13.00	Horizontal	PASS
5	9564.061	-38.73	-13.00	Horizontal	PASS
6	18456.943	-28.73	-13.00	Horizontal	PASS

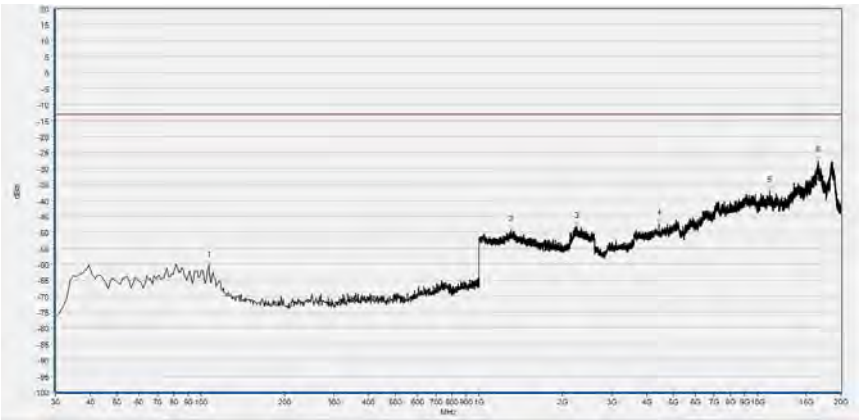


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	84.374	-63.02	-13.00	Vertical	PASS
2	662.102	-66.32	-13.00	Vertical	PASS
3	1364.982	-49.83	-13.00	Vertical	PASS
4	2535.168	-49.10	-13.00	Vertical	PASS
5	10384.897	-36.36	-13.00	Vertical	PASS
6	18494.649	-28.71	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, Mid Channel, QPSK

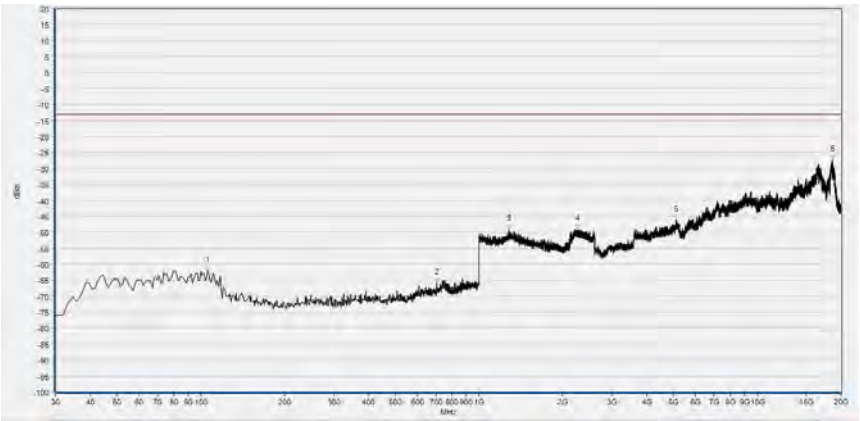


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	100.881	-61.79	-13.00	Horizontal	PASS
2	732.983	-64.79	-13.00	Horizontal	PASS
3	1340.970	-50.47	-13.00	Horizontal	PASS
4	2227.014	-48.07	-13.00	Horizontal	PASS
5	6579.463	-42.66	-13.00	Horizontal	PASS
6	16542.624	-28.53	-13.00	Horizontal	PASS

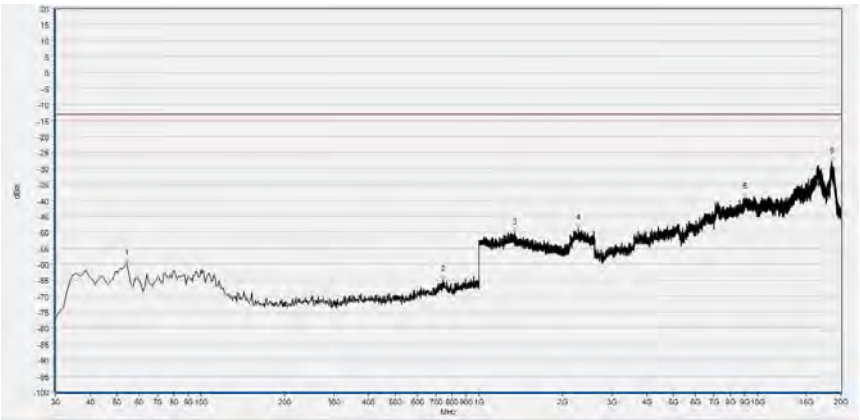


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	106.707	-60.46	-13.00	Vertical	PASS
2	1304.952	-49.19	-13.00	Vertical	PASS
3	2241.421	-48.21	-13.00	Vertical	PASS
4	4421.504	-47.31	-13.00	Vertical	PASS
5	11072.312	-36.99	-13.00	Vertical	PASS
6	16554.226	-27.61	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, Mid Channel, 16QAM

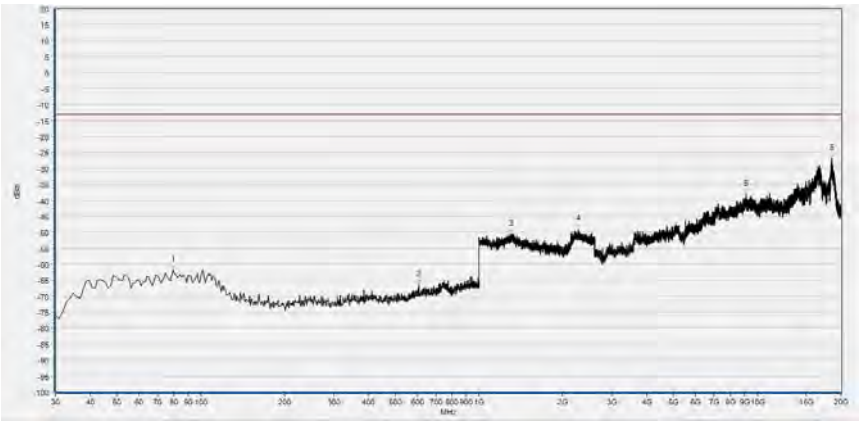


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	105.736	-62.03	-13.00	Horizontal	PASS
2	705.796	-65.74	-13.00	Horizontal	PASS
3	1281.741	-49.13	-13.00	Horizontal	PASS
4	2255.028	-48.97	-13.00	Horizontal	PASS
5	5106.018	-46.21	-13.00	Horizontal	PASS
6	18575.863	-27.27	-13.00	Horizontal	PASS

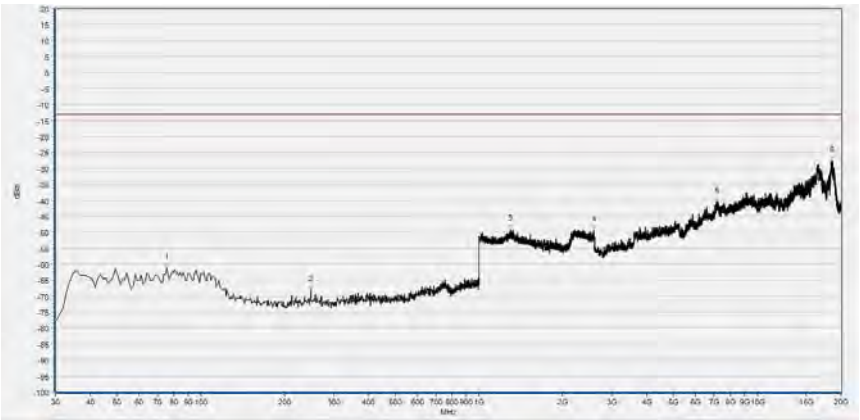


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	54.274	-59.69	-13.00	Vertical	PASS
2	741.722	-64.96	-13.00	Vertical	PASS
3	1339.370	-50.23	-13.00	Vertical	PASS
4	2276.638	-48.86	-13.00	Vertical	PASS
5	9027.471	-38.98	-13.00	Vertical	PASS
6	18564.261	-27.86	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, High Channel, QPSK

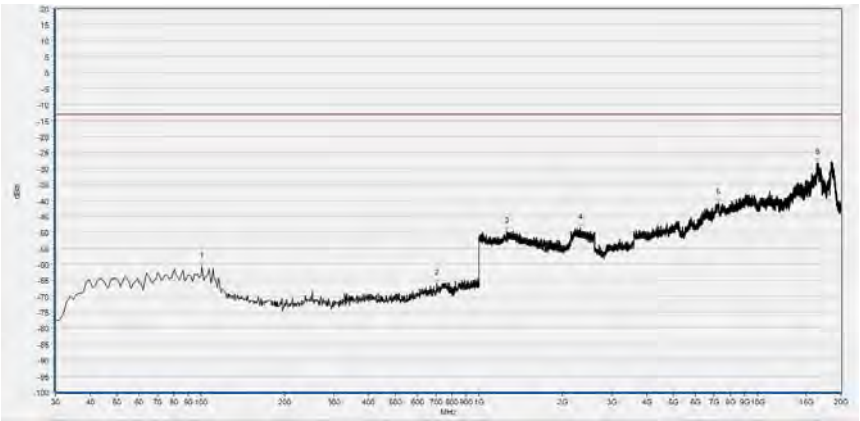


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	79.520	-61.70	-13.00	Horizontal	PASS
2	609.670	-66.50	-13.00	Horizontal	PASS
3	1299.350	-50.68	-13.00	Horizontal	PASS
4	2275.838	-48.94	-13.00	Horizontal	PASS
5	9114.486	-38.15	-13.00	Horizontal	PASS
6	18555.559	-26.97	-13.00	Horizontal	PASS

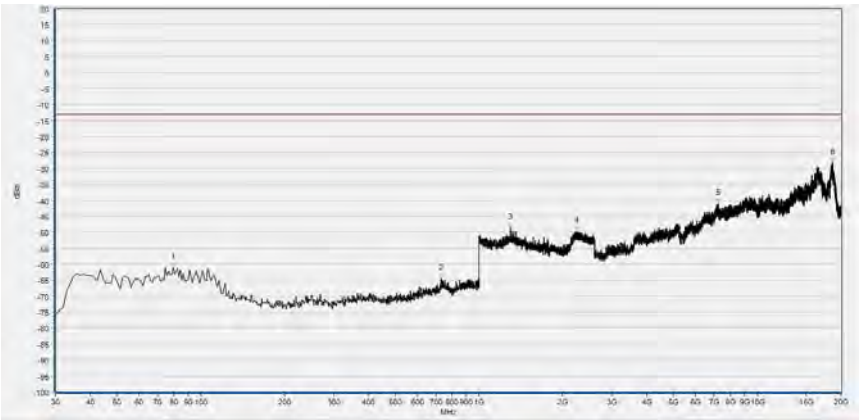


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	75.636	-61.20	-13.00	Vertical	PASS
2	248.468	-68.06	-13.00	Vertical	PASS
3	1297.749	-49.01	-13.00	Vertical	PASS
4	2583.192	-49.26	-13.00	Vertical	PASS
5	7165.361	-40.43	-13.00	Vertical	PASS
6	18546.858	-27.58	-13.00	Vertical	PASS

LTE Band 4 20MHz BW, High Channel, 16QAM

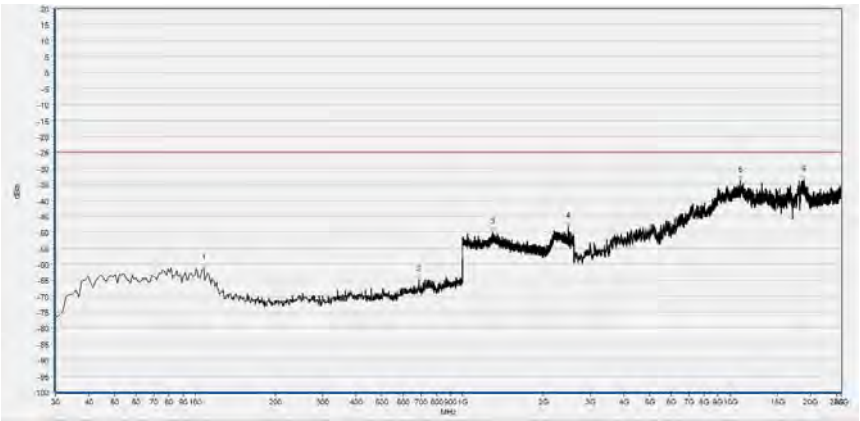


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	100.881	-60.72	-13.00	Horizontal	PASS
2	703.854	-66.01	-13.00	Horizontal	PASS
3	1256.928	-49.79	-13.00	Horizontal	PASS
4	2312.656	-48.58	-13.00	Horizontal	PASS
5	7240.773	-40.84	-13.00	Horizontal	PASS
6	16473.012	-28.37	-13.00	Horizontal	PASS

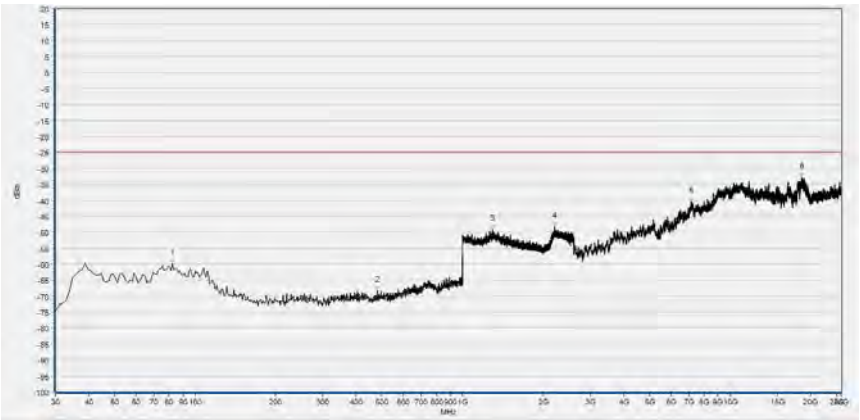


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	79.520	-61.18	-13.00	Vertical	PASS
2	731.041	-64.47	-13.00	Vertical	PASS
3	1296.948	-48.66	-13.00	Vertical	PASS
4	2244.622	-49.74	-13.00	Vertical	PASS
5	7243.674	-41.08	-13.00	Vertical	PASS
6	18590.365	-28.38	-13.00	Vertical	PASS

LTE Band 7 20MHz BW, Low Channel, QPSK

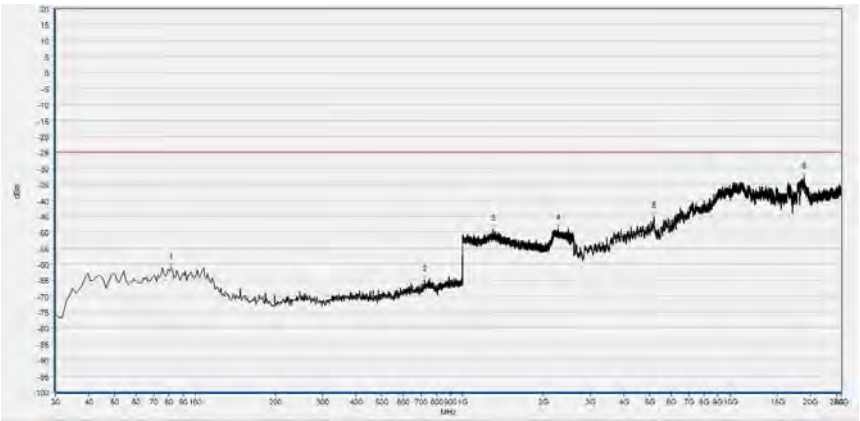


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	107.600	-61.30	-25.00	Horizontal	PASS
2	687.660	-64.82	-25.00	Horizontal	PASS
3	1297.079	-50.01	-25.00	Horizontal	PASS
4	2489.236	-48.13	-25.00	Horizontal	PASS
5	10944.681	-33.89	-25.00	Horizontal	PASS
6	18906.383	-33.55	-25.00	Horizontal	PASS

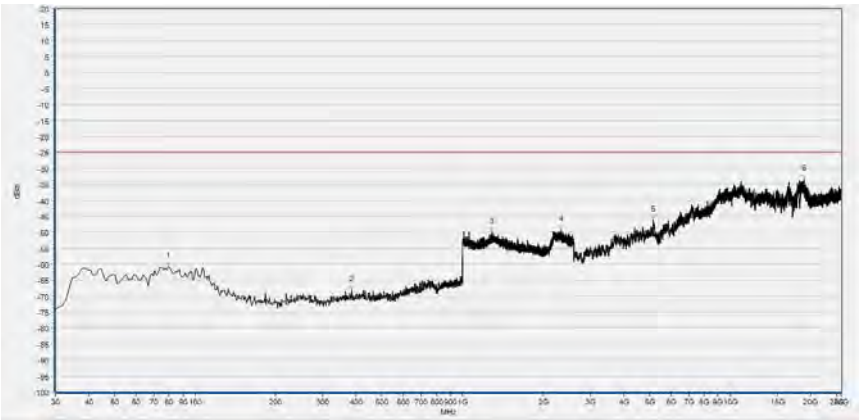


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	82.380	-59.89	-25.00	Vertical	PASS
2	481.050	-68.27	-25.00	Vertical	PASS
3	1293.878	-49.14	-25.00	Vertical	PASS
4	2210.084	-48.20	-25.00	Vertical	PASS
5	7161.702	-40.34	-25.00	Vertical	PASS
6	18523.404	-32.65	-25.00	Vertical	PASS

LTE Band 7 20MHz BW, Low Channel, 16QAM

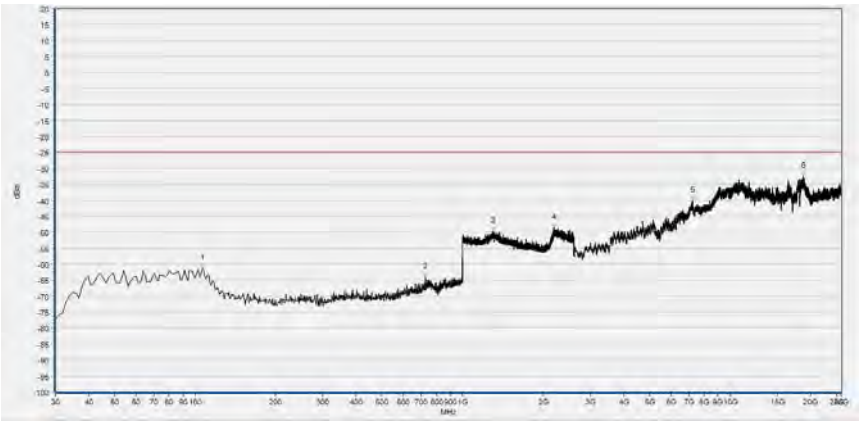


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	81.410	-61.09	-25.00	Horizontal	PASS
2	722.580	-64.91	-25.00	Horizontal	PASS
3	1300.280	-49.01	-25.00	Horizontal	PASS
4	2276.671	-48.85	-25.00	Horizontal	PASS
5	5182.979	-44.93	-25.00	Horizontal	PASS
6	18842.553	-32.63	-25.00	Horizontal	PASS

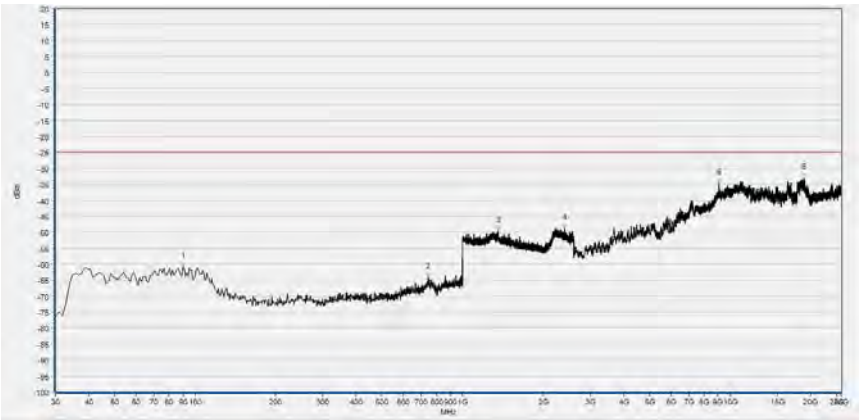


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	79.470	-60.67	-25.00	Vertical	PASS
2	385.990	-67.97	-25.00	Vertical	PASS
3	1284.914	-50.00	-25.00	Vertical	PASS
4	2332.373	-49.25	-25.00	Vertical	PASS
5	5170.213	-46.22	-25.00	Vertical	PASS
6	18855.319	-33.38	-25.00	Vertical	PASS

LTE Band 7 20MHz BW, Mid Channel, QPSK

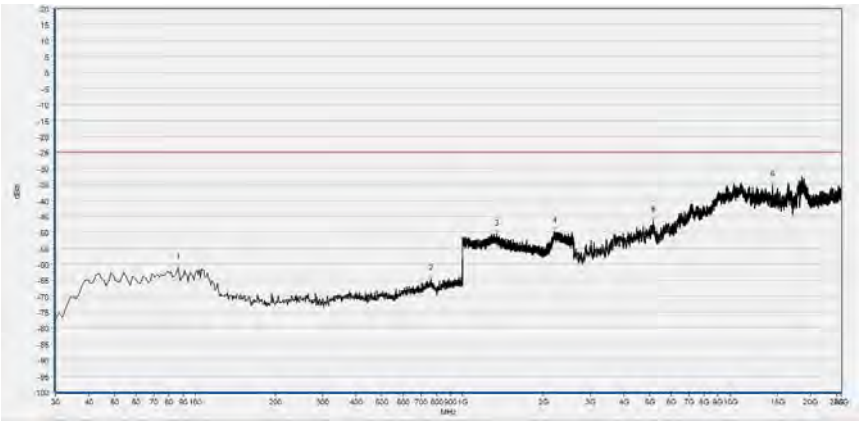


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	106.630	-61.44	-25.00	Horizontal	PASS
2	727.430	-64.00	-25.00	Horizontal	PASS
3	1300.920	-49.72	-25.00	Horizontal	PASS
4	2192.797	-48.49	-25.00	Horizontal	PASS
5	7221.277	-40.16	-25.00	Horizontal	PASS
6	18804.255	-32.56	-25.00	Horizontal	PASS

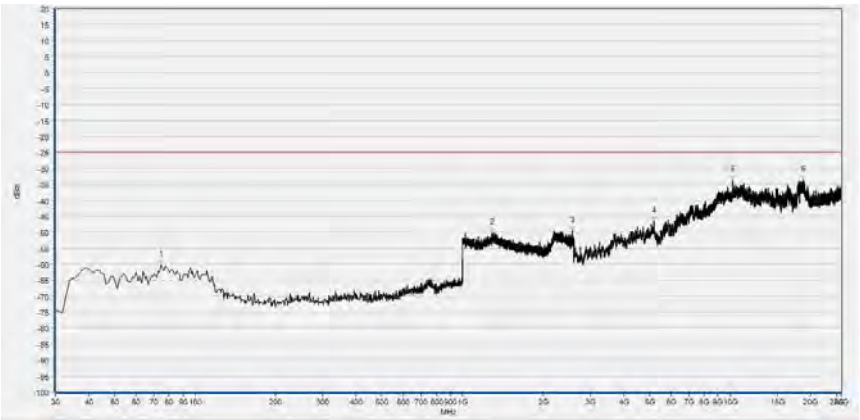


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	90.140	-60.60	-25.00	Vertical	PASS
2	742.950	-63.96	-25.00	Vertical	PASS
3	1358.543	-49.54	-25.00	Vertical	PASS
4	2400.240	-48.91	-25.00	Vertical	PASS
5	9076.596	-34.73	-25.00	Vertical	PASS
6	18902.128	-32.98	-25.00	Vertical	PASS

LTE Band 7 20MHz BW, Mid Channel, 16QAM

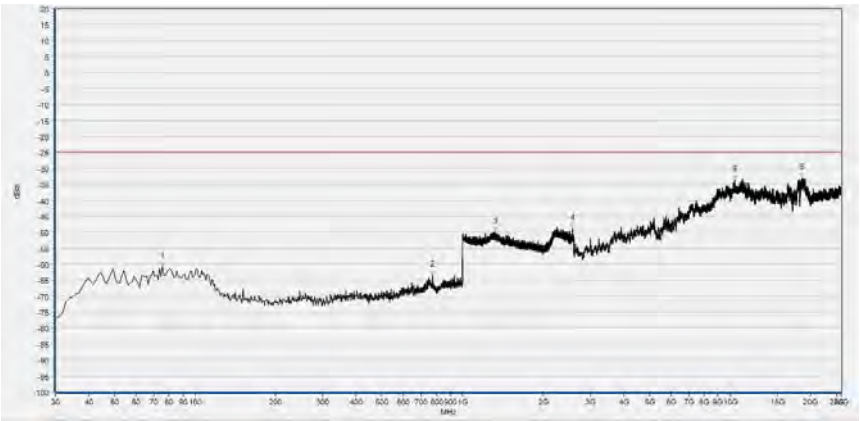


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	86.260	-61.10	-25.00	Horizontal	PASS
2	761.380	-64.40	-25.00	Horizontal	PASS
3	1342.537	-50.67	-25.00	Horizontal	PASS
4	2203.041	-49.82	-25.00	Horizontal	PASS
5	5174.468	-46.38	-25.00	Horizontal	PASS
6	14408.511	-35.13	-25.00	Horizontal	PASS

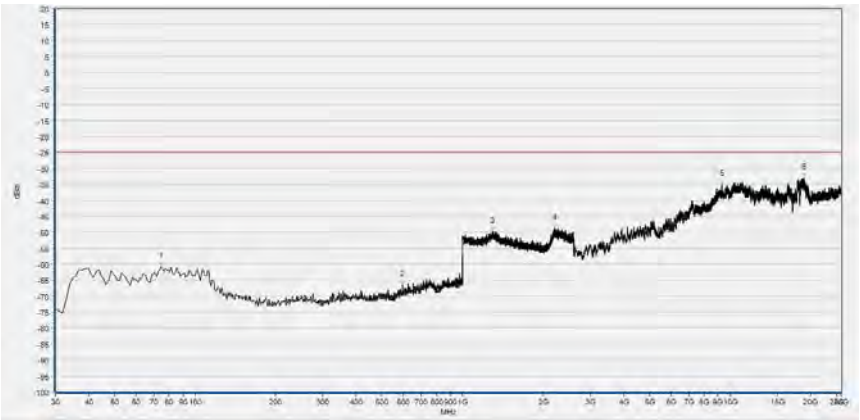


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	74.620	-60.17	-25.00	Vertical	PASS
2	1291.957	-50.24	-25.00	Vertical	PASS
3	2568.627	-49.39	-25.00	Vertical	PASS
4	5200.000	-46.49	-25.00	Vertical	PASS
5	10229.787	-33.60	-25.00	Vertical	PASS
6	18825.532	-33.52	-25.00	Vertical	PASS

LTE Band 7 20MHz BW, High Channel, QPSK

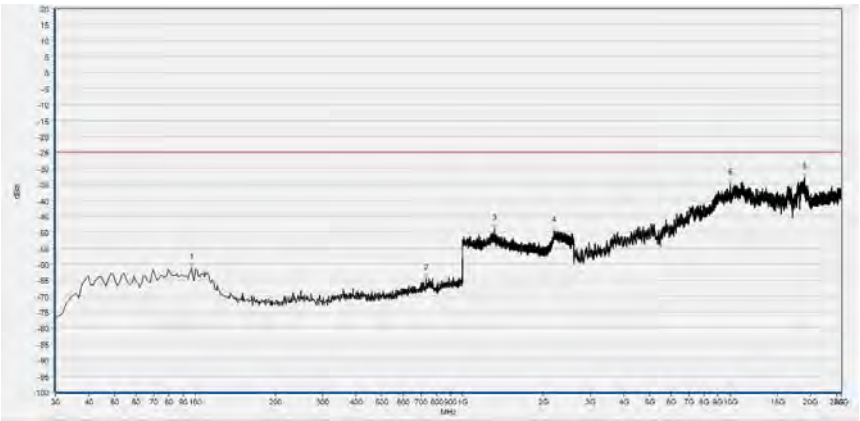


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	75.590	-60.74	-25.00	Horizontal	PASS
2	771.080	-63.40	-25.00	Horizontal	PASS
3	1325.250	-50.05	-25.00	Horizontal	PASS
4	2570.548	-48.83	-25.00	Horizontal	PASS
5	10417.021	-33.71	-25.00	Horizontal	PASS
6	18578.723	-32.90	-25.00	Horizontal	PASS

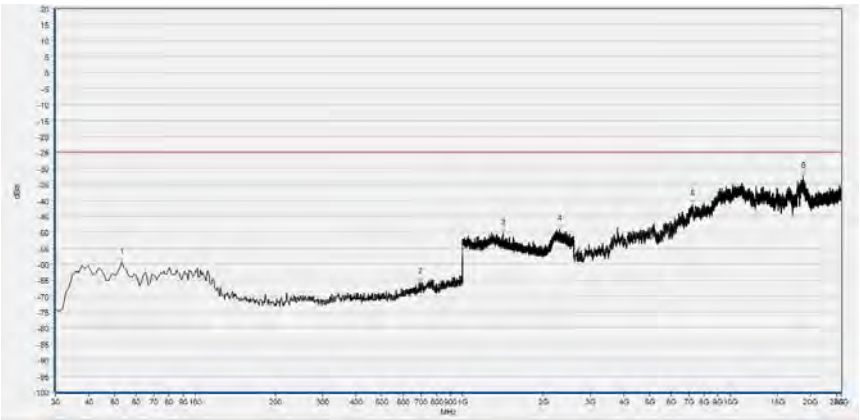


No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	74.620	-60.77	-25.00	Vertical	PASS
2	597.450	-66.50	-25.00	Vertical	PASS
3	1297.079	-49.77	-25.00	Vertical	PASS
4	2209.444	-48.93	-25.00	Vertical	PASS
5	9319.149	-35.03	-25.00	Vertical	PASS
6	18868.085	-33.04	-25.00	Vertical	PASS

LTE Band 7 20MHz BW, High Channel, 16QAM



No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	96.930	-61.03	-25.00	Horizontal	PASS
2	731.310	-64.54	-25.00	Horizontal	PASS
3	1316.927	-48.92	-25.00	Horizontal	PASS
4	2195.358	-49.55	-25.00	Horizontal	PASS
5	9995.745	-34.67	-25.00	Horizontal	PASS
6	18965.957	-32.84	-25.00	Horizontal	PASS



No.	Fre. (MHz)	Peak	Limit(PK)	Antenna	Verdict
1	53.280	-59.32	-25.00	Vertical	PASS
2	695.420	-65.53	-25.00	Vertical	PASS
3	1414.886	-50.35	-25.00	Vertical	PASS
4	2308.683	-49.15	-25.00	Vertical	PASS
5	7234.043	-41.18	-25.00	Vertical	PASS
6	18808.511	-32.56	-25.00	Vertical	PASS

Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Output Power	±2.22 dB
Bandwidth	±5%
Conducted Spurious Emission	±2.77 dB
Band Edge	±2.77 dB
Equivalent Isotropic Radiated Power	±2.22 dB
Radiated Spurious Emissions	±6 dB

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI/TIA-603-E-2016 and CISPR Publication 22; the FCC designation number is CN1192.

4. Test Equipments Utilized

4.1 Conducted Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
Power Splitter	NW521	1506A	Weinschel	2018.04.17	2019.04.16
Attenuator 1	(N/A.)	10dB	Resnet	2018.04.17	2019.04.16
Attenuator 2	(N/A.)	3dB	Resnet	2018.04.17	2019.04.16
EXA Signal Analzyer	MY53470836	N9010A	Agilent	2017.12.03	2018.12.02
Wireless synthesizer	MY48364176	8960 -E5515C	Agilent	2018.04.17	2019.04.16
RF cable (30MHz-26GHz)	CB01	RF01	Morlab	N/A	N/A
Coaxial cable	CB02	RF02	Morlab	N/A	N/A
SMA connector	CN01	RF03	HUBER-SUHNER	N/A	N/A
Temperature Chamber	(N/A)	HUT705P	CHONGQING HANBA EXPERIMENTAL EQUIPMENT CO.,LTD	2018.04.17	2019.04.16

4.2Auxiliary Test Equipment

Equipment Name	Model No.	Brand Name	Manufacturer	Cal.Date	Cal. Due
Computer	T430i	Think Pad	Lenovo	N/A	N/A

4.3 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal. Due
System Simulator	152038	CMW500	R&S	2018.05.08	2019.05.07
Receiver	MY54130016	N9038A	Agilent	2018.05.08	2019.05.07
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2018.05.08	2019.05.07
Test Antenna - Horn	9170C-531	BBHA9170	Schwarzbeck	2017.09.13	2018.09.12
Test Antenna - Horn	01774	BBHA 9120D	Schwarzbeck	2017.09.13	2018.09.12
Coaxial cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
1-18GHz pre-Amplifier	MA02	TS-PR18	Rohde& Schwarz	2018.05.08	2019.05.07
18-26.5GHz pre-Amplifier	MA03	TS-PR18	Rohde& Schwarz	2018.05.08	2019.05.07
Anechoic Chamber	N/A	9m*6m*6m	CRT	2017.11.19	2020.11.18

END OF REPORT